AZ2808/01/11/14/17



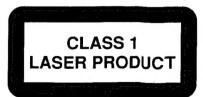


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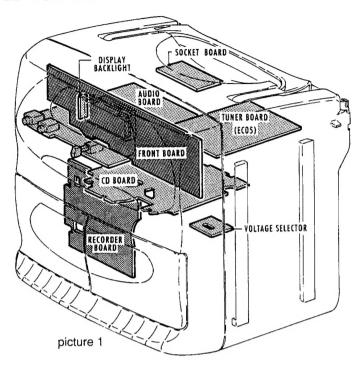
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LOCATION OF PRINTED BOARDS



TECHNICAL SPECIFICATION

General:

Mains voltage : 220V-230V / 50Hz for /00 /14

230V-240V / 50Hz for /05 /10

110V-127V / 220V-240V /50Hz switchable for /01/11/13

120V / 60Hz for /07/17 100V / 50Hz for /06

Power consumption : ≤ 35W at maximum output power

 \leq 5W in stand by

Battery : 9V (6xR20)
Battery lifetime : 12 hours typ.

Amplifier:

Headphone

Power stage protection: temperature and shortcircuit

AZ2805 AZ2808

Output power mains $: 2 \times 2 \text{Wrms}$ -1dB at 4Ω D=10% $2 \times 3.2 \text{Wrms}$ -1dB at 8Ω D=10% battery $: 2 \times 2 \text{Wrms}$ -1dB at 4Ω D=10% $2 \times 3.9 \text{Wrms}$ -1dB at 8Ω D=10%

: 3,5mm stereo jack, ≥ 20mW at 32Ω (= 0,8V at 32Ω) D=10%

Frequency response : 30Hz - 16kHz (typ. at volume set to -20dB, CD mode 0dB signal level ⇒use SBC429)

Digital Sound Control DSC

 100Hz
 10kHz

 Flat
 -2dB ±3dB
 0dB ±3dB

 Pop
 +7dB ±3dB
 +8dB ±3dB

 Jazz
 +3dB±3dB
 +5dB ±3dB

 DBB
 +7dB ±3dB
 +4dB ±3dB

CD: To be measured on phone socket with 100k Ω load.

Frequency response : 30 - 16.000 Hz - 3dB

 Signal/Noise ratio
 : ≥80dB

 Distortion
 : ≤0.3% at 1 kHz

 Channel difference
 : ≤3dB at 1 kHz

 Channel crosstalk
 : 35dB max.

De emphasis : 0 or 15/50µs switched automatically by subcode on the disc

Laser

Output power : 500µW
Wave length : 780 ±20nm

Tuner:

,	FM 87,5 - 108 MHz 35.81 - 74/87.5 - 108 MHz for /14) (76 - 90 MHz + Ch1 95.75MHz, 95.75 MHz, Ch3 107.75 MHz for /0	MW 531 - 1602 kHz (530 - 1700 kHz for /01/17)	LW ¹⁾ 153- 279 kHz	SW ¹⁾ 3.9 - 12.1MHz
!F	10,7 MHz ± 30 kHz	450kHz ± 1 kHz	450 kHz ± 1 kHz	450 kHz ± 1 kHz
Sensitivity Mono: 26dB S/N, m=30% -3 dB limiting point	\leq 5 μ V (2 μ V typ.) \leq 5 μ V (2 μ V typ.)	$\leq 4mV/m \ (3,5mV/m \ typ.)$	$\leq 6mV/m \ (4,5mV/m \ typ.)$	$\leq 210 \mu V$ ($60 \mu V$ typ.)
Frequency grid	50 kHz (30/50 kHz for /14) (100 kHz for /06/17) (50/100 kHz* for /01/11)	9 kHz (10 kHz for /17) (9/10 kHz* for /01/11)	3 kHz	5kHz
Distortion	≤ 3% (≤ 1% typ.) RF=1mV, Δf=75kHz	\leq 5% (3% typ.) RF=50mV/m, m=80%	\leq 5% (3% typ.) RF=50mV/m, m=80%	\leq 5% (3% typ.) RF=5mV, m=80%
Image rejection ratio	\geq 25dB (40dB typ.)	≥ 28dB	≥ 30dB	≥ 16/6dB
Channel separation at 1kHz	≥ 22dB (27dB typ.)			

^{*} can be selected via software initialization

Recorder: To be measured on phone socket with $100k\Omega$ load.

Tape speed : 4,76cm/s $\pm 3\%$ Wow & Flutter : \leq 0,5% weighted Winding speed : 110s for C60 cassette

Erase / Bias system : permanent magnetic erase head / AC 73 ±1.5kHz

Distortion at 250 nWb/m $: \le 7\%$ Signal/Noise ratio (FF weighted) $: \ge 40$ dB (A - weighted) $: \ge 43$ dB

Channel difference at PB : ≤ 3dB note: set is not prepared to play or record *IEC II Chrome* cassettes!

Channel difference overall : $\leq 5dB$ Channel separation : $\geq 15dB$ at 1kHz

Track separation : ≥ 55dB at 1kHz

Frequency response IEC I

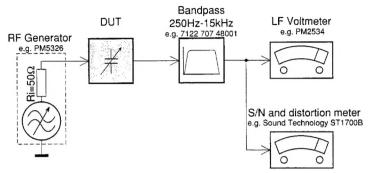
PB : 125Hz - 8000Hz (within 8dB) overall : 250Hz - 6300Hz (within 8dB)

Remote Control:	RC5 comm		nands <i>RC0206</i>	RC5 comn	nands <i>RC0170</i>
Remote Control key	Systen CD	n Code <i>Tuner</i>	Command Code	System Code	Command (ode
PLAY/PAUSE	20		53	20	53
STOP	20		54	20	54
NEXT (PRESET UP)	20		32	20	32
PREVIOUS (PRESET DOWN)	20		33	20	33
VOLUME UP	16	16	16	16	16
VOLUME DOWN	16	16	17	16	17
OPEN/CLOSE	20	20	45	20	45
CD mode	20		63		
TUNER mode		17	63		
SHUFFLE	20		28		
1	· 20	17	01		
2	20	17	02		
3	20	17	03		
4	20	17	04		
5	20	17	05		
6	20	17	06		
7	20	17	07		
8	20	17	08		
9	20	17	09		
0	20	17	00		
DISC UP	not used	1			

¹⁾ not in all versions

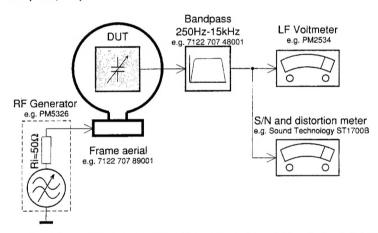
MEASUREMENT SETUP

Tuner FM



Use a bandpass filter to eliminate hum (50Hz, 100Hz) and disturbance from the pilottone (19kHz, 38kHz).

Tuner AM (MW,LW)



To avoid atmospheric interference all AM-measurements have to be carried out in a Faraday's cage. Use a bandpass filter (or at least a high pass filter with 250Hz) to eliminate hum (50Hz, 100Hz).

CD

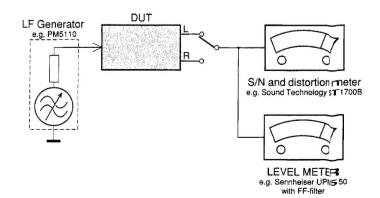
Use Audio Signal Disc SBC429 4822 397 30184 (replaces test disc 3)

DUT R O O O S/N and distortion meter e.g. Sound Technology ST1700B

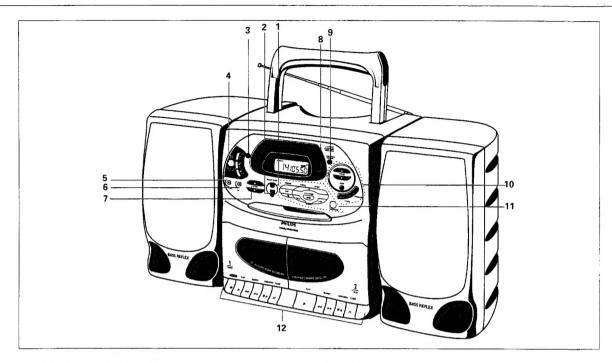
LEVEL METER
e.g. Sennheiser UPM550
with FF-filter

RECORDER

Use Universal Test Cassette Fe SBC420 4822 397 30071



CONTROLS



BASIC FUNCTIONS:

- 1 CD TAPE TUNER.. to select the sound source
- (2) POWER.....to turn the set on and off
- (AZ 2808 only)
- 4 DSCDIGITAL SOUND CON-TROL: to increase the bass level or to enhance the type of music you are listening to DBB-JAZZ-POP
- (5) \(\begin{align*} \tau \tag{3.5} \\ \text{mm} \text{ headphone socket} \\ \text{Note: Inserting the plug will disconnect the loudspeakers.} \end{align*}
- 6 MIC.....3.5 mm microphone socket
- 7 VOLUME ▲ ▼.....to adjust the volume level
- 8 REMOTE SENSOR ..sensor for the infrared remote control
- 9 HIGH SPEED DUBBING...Press to copy at high speed

10 RADIO:

PROGRAM......to program preset stations
TUNING I
→ ► I....to tune to radio stations
BANDto select the wave band
(FW-MW-LW AM SW)
PRESET

▼to select a preset station

OPEN-CLOSEto open/close the CD tay

(11) CD PLAYER:

PLAY-PAUSE ►II....to start and to interrupt CD
play

STOP ■to stop CD play and to erase
a program

SEARCH ► ►I.....to skip and to search forwards and backwards

SHUFFLE......to play in random order
PROGRAM.....to program track numbers
and to review the program

REPEATto repeat one track or the entire CD or the program

12) CASSETTE RECORDER:

RECORD ●to start recording (deck) only)

PLAY ▶.....to start playback

SEARCH \longleftrightarrow to wind or rewind the $t\phi$ e

STOP-OPEN **A**...to stop the tape and to pen the cassette holder

PAUSEto interrupt the recording or playback

FRONT

FRONT

Remote control

Remote control AZ 2805:

to open/close the CD tray OPEN.

- CD Mode: to select the beginning of the - TUNER Mode: to select a preset station current/previous or a subsequent track to start and to interrupt CD play ¥

VOLUME ▼ ▲.....to increase or decrease the volume level

to stop CD play

BASIC FUNCTIONS

English

Removable loudspeakers

LOUDSPEAKERS

POWER SUPPLY

Connecting the loudspeakers

Connect the right speaker to the R socket and the left

Note: Loudspeakers other than supplied can be used. oudspeaker to the L socket.

They have to be 4 Ohms for type AZ 2805 and 8 Ohms for type AZ 2808.

Taking off the loudspeakers

Keep the lever (on the back of the loudspeakers) pressed and slide the loudspeaker upwards.

Slide the loudspeakers from above in the sleeves on the sides of the set cabinet. The speakers will click into position. Attaching the loudspeakers



Switching on and off/standby

Jush the POWER button.

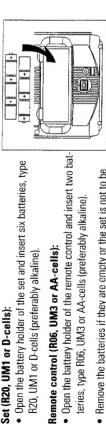
→ The display lights up (only if the set is connected to the AC mains supply).

The set is switched off when the POWER button is released.

remembered, as well as the sound settings, the tuner presets and When the set is switched off the last source selected will be the volume level.

n order to switch off the power supply, remove the mains plug.

Note: If the set runs on batteries, always be sure to set the POWER button in position OFF after use. This will avoid unnecessary mains consumption.



Open the battery holder of the set and insert six batteries, type

Set (R20, UM1 or D-cells):

Batteries



Remove the batteries if they are empty or the set is not to be

used for a long time.

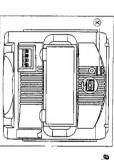
teries, type R06, UM3 or AA-cells (preferably alkaline).

Remote control (R06, UM3 or AA-cells): R20, UM1 or D-cells (preferably alkaline).

All kinds of batteries contain chemical substances

therefor they should be disposed of properly.

Mains



sponds to your local mains voltage. If it does not, consult your dealer or service organisation. The type plate is located at 1 Check if the mains voltage as shown on the type plate correthe base of the set.

If the set is equipped with a VOLTAGE selector $\widehat{\otimes}$, set this selector to the local mains voltage.

socket. The AC mains supply is switched on. The mains cable 2 Connect the mains cable to the AC MAINS inlet and the wall is inside the battery compartement. mains. To change over to battery supply, pull out the plug from the To disconnect the set from the mains completely, withdraw the UNIT'S AG MAIN'S SOCKET.

mains plug from the wall socket

The battery supply is switched off when the set is connected to the

English

English

Adjusting volume and sound

BASIC FUNCTIONS

Adjust the volume using the controls VOLUME ▼ ▲. Display indication: Volume level from 0 to 32.

English

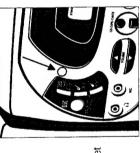
Adjust the sound to your taste by pressing the button DSC several

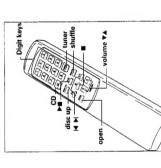
A light indicates either DBB-JAZZ-P0P.

Create a phenomenal surround sound effect by pressing INCRE-DIBLE SOUND (AZ 2808 only)

▼ The INCREDIBLE SOUND button lights up.

The effect of incredible sound may vary with different types of music and can be improved by leaving the speakers attached to the set. The bass frequencies can also be emphasised if you place the set against a wall or on a bookshelf. (Do not cover any vents and leave sufficent room around the unit for ventilation





to play a CD in random order

SHUFFLE

Ξ

X Y

CD: to key in a track number

Digits 0-9

TUNER.

to select tuner functions

to select CD functions

Remote control

to decrease or increase the volume level TUNER: to select a radio preset station current/previous or a subsequent track to start and to interrupt CD playback Note: The DISC UP button on the remote control has no CD: to select the beginning of the IUNER: to key in a preset station

RAD10

REMOTE CONTROL

Tuning to radio stations

- 1 Select the tuner by pressing the CD TAPE TUNER button several times until TUNTE appears on the display.
- Select the wave band by using the BAND selector.
 - Display indication: the selected waveband
- Press TUNING M▲ or ▶₩ for approx. one second and then release the button.
 - strength. Display indication during automatic tuning: 5 c h → The radio automatically tunes to a station with sufficent
- 4 Repeat this procedure until you find a desired station.

often as necessary for optimum reception, or until the correct fre-To tune to a weak transmitter briefly press TUNING MM or ▶ as quency is indicated in the display.

Improving the RADIO reception

980

- For FM and SW, pull out the telescopic antenna. To improve the signal, incline and turn the antenna. Reduce its length if the signal is too strong (very close to a transmitter).
- For AM, MW and LW, direct the built-in antenna by turning the whole set. The telescopic antenna is not needed

Switchable tuning grid (not all versions)

n North and South America the frequency step between adjecent step is 9 kHz. Usually this frequency step has been preset in the channels in the AM band is 10 kHz. In the rest of the world this actory of your area. (/01 versions only)

 Keep the BAND selector button pressed for more than 5 In some versions the frequency step can be changed:

- The display shows either (☐ ☐ 1d or ☐ ☐ 1d.

Programming radio stations (29 preset stations)

Notes: – Always select the desired sound source first and then

corresponding function on this set.

press the required function key.

to open/close the CD tray

VOLUME ▼ ▲

to stop CD playback

Numbers consisting of two figures must be keyed in

within 2 seconds.

You can store up to 29 radio stations in the memory. When tuning to a preset station, the preset number (1 to 29) is indicated in the

- Select the tuner by pressing the CD TAPE TUNER button several times until TUNTER appears on the display.
 - 2 Tune to a desired station with TUNING № or ▶, as described
- If the frequency is already stored in the memory, the preset

number will be displayed



English

Search backwards ← and ► forwards

CD PLAYER

CD PLAYER

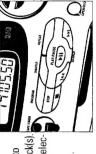
Selecting another track

skip to the beginning of the current/previous or subsequent track(s) Briefly press the SEARCH M or ▶ button once/several times to

During play: CD playback continues automatically with the selected track.

In stop position: press PLAY-PAUSE ►II to start CD playback





 Display indication: the selected track number. Searching for a passage during CD playback 1 Hold down the SEARCH K

or N

button to find a particular pas- CD playback continues at low volume. sage in forwards or backwards direction.

2 Release the button when you have reached the desired passage.

Note: In the SHUFFLE and REPEAT-1 mode and when playing a orogram, searching is only possible within the particular

3 Insert an audio CD (printed side up) and close the tray by pushing

it gently or pressing the OPEN CLOSE button again

2 Open the tray by pressing the OPEN CLOSE button.

several times until con appears on the display.

1 Select the CD player by pressing the CD • TAPE • TUNER button

Press PRESET ▲ or ▼ until the desired preset number appears

on the display. Playing a CD

Press PROGRAM to confirm the setting.

preset station.

uning to preset stations

Different playing modes: SHUFFLE / REPEAT

SHUFFLE – playing in random order

Press SHUFFLE before or during CD playback.

Ñ

Display indication: the current track number and the elapsed

4 Press the PLAY-PAUSE ► III button to start CD playback.

Display indication: the total number of tracks and the total

playing time.

5 Press the STOP **a** button to stop CD playback.

time of the current track.

Display indication: the time of the current position flashes.

Notes: CD playback will also stop if:

you open the tray;

6 You can interrupt CD playback by pressing PLAY.PAUSE ►11.

Continue CD playback by pressing the button again.

Display indication: the total number of tracks and the total The CD player starts and scans the contents list of the CD.

playing time. After that the CD player stops.

→ All the tracks of the CD (or program if available) will now be played in random order.

2 To return to normal CD playback, press SHUFFLE again.

REPEAT - Repeating the entire CD or one track of the CD

Before or during CD playback, press repeated REPEAT to cause the display showing the different repeating modes.

REPEAT ALL: the entire CD or programm is played repeatedly.

REPEAT: the current track is played repeatedly

To return to normal CD play press REPEAT until the display indi-

time, e. g. you can repeatedly play the entire CD or program Note: You can activate the different playing modes at the same in random order (shuffle repeat all).





rror

→ the display indicates £rrar (see TROUBLESHOOTING).

When you make a mistake in operating the CD player or the CD

player cannot read the CD

 you push the POWER button or the end of the CD is reached.

RADIO

4 Press PRESET ▲ or ▼ to allocate a number from 1 to 29 to the During programming, PROGRAM flashes on the display. 3 Press PROGRAM to enter the programming mode. English

CD PLAYER

Programming track numbers

You may select a number of tracks and store these in the memory in the desired sequence. You may store any track more then once. At most, 20 tracks can be stored in the memory.

- Select the desired track with SEARCH M or ▶ H.
- 2 As soon as the desired track is displayed, press the PROGRAM button to store the track in the memory.
- ◆ On the display PROGRAM appears. The number of the stored track, Pr. and the total number of stored tracks is shown.
- 3 Select and store in this way all desired tracks.

- 4 You can review your settings by pressing the PROGRAM button for more than 2 seconds.
- The display shows all stored track numbers in sequence.

Notes: – When you try to store more than 20 tracks the display

When you press PROGRAM and there is no track selected

the display shows 5 £ L £ C Ł



Playing the program

If you have selected the tracks in the stop position, press PLAY.PAUSE P.II. If you have selected the tracks during CD playback, press first STOP
and then press PLAY.PAUSE

Erasing the program from the stop position

From the stop position, press STOP ■.

gram is erased

- Notes: The program will also be erased if you: interrupt the power supply
- press the POWER button.

CASSETTE RECORDER

Protecting tapes from accidential erasure

break out the left tab. Now, recording on this side is no longer Keep the casette side to be safeguarded in front of you and possible

English

To record again on this side of the casette, cover the aperture with a piece of adhesive tape.



1 Select the CD by pressing the CD • TAPE • TUNER button several Recording from the CD player - CD synchro start

times until co appears on the display.

2 Insert a CD and if desired, program track numbers.

3 Press STOP.0PEN ■ ▲ to open the cassette compartement.

Insert a blank cassette with the full reel on the left.

Press RECORD • to start recording.

→ Playing of the CD or program starts automatically. It is not necessary to start the CD player separately

6 For brief interruptions, press PAUSE II. To resume recording, press the PAUSE II key once more.

7 To stop recording, press STOP.OPEN

Notes: The recording can be started from different positons.

 if the CD player is in the pause position, recording will start from this very position (use SEARCH мм or мм); - if the CD player is in the stop position, recording will

Recording from the radio or with the microphone

start from the beginning of the CD or program.

1 (Selecting and preparing the source)

RADIO: Select the radio by pressing the CD • TAPE • TUNER button several times until name appears on the display.

CD • TAPE • TUNER button several times until FIRE appears on MICROPHONE: Select the tape by pressing the the display.

and set the VOLUME control to zero (monitoring during micro-Connect a microphone with a 3.5 mm plug to the MIC socket phone recording is not possible).

English

REMOTE CONTROL

Switching on and off/standby

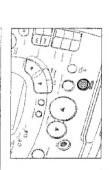
Push the POWER button.

→ The display lights up. If the set runs from batteries the display will not be back-lit.

In order to switch off the power supply, remove the mains plug. The set is switched off when the POWER button is released.

Note: If you run the set from batteries, always be sure to switch the set off after use. This will avoid unnecessary power consumption

Adjusting volume and sound



2 Press STOP.0PEN ■ ▲ to open the cassette compartement.

CASSETTE RECORDER

- 3 Insert a unprotected blank cassette with the full reel on the left hand side
- Press RECORD to start recording.
- 5 For brief interruptions press PAUSE II. To resume recording press the PAUSE II key once more.
- To stop recording, press STOP.OPEN ■▲

microphone and mix the sounds. Otherwise, be sure there is no Vote: When recording from the radio or a CD, you can connect a microphone connected that could disturb your recording

Dubbing - copying from deck 2 to deck 1

When dubbing, it is recommended to use new batteries or to connect the set to the AC mains supply.

- Press the HIGH SPEED DUBBING button for high speed copying. Do not switch this selector during dubbing.
- 2 Insert a recorded cassette into deck 2 and a cassette which is suited for recording into deck 1.
- 3 Press PAUSE followed by RECORD on deck 1.
- 4 To start dubbing, press PLAY ▶ on deck 2.
- 5 To stop dubbing, press both STOP-OPEN buttons ▲.

Press PAUSE II on deck 1 if you wish to omit undesired passages. The playback in deck 2 will continue. To restart dubbing, press PAUSE II again. By pressing PAUSE II in deck 2 during dubbing, a blank part will be recorded in deck 1.



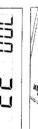


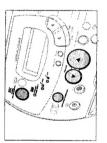
Environmental information

All redundant packing material has been omitted. We have done our outmost to make the packaging easy separable into three mono materials: cardboard (box), expandable polystyrene (buffer) and polyethylene (bags, protective foam sheet).

Please observe the local regulations regarding the disposal of packing materials, exhausted batte. Your set consists of material which can be recycled if disassembled by a specialized company. ries and old equipment.

Adjust the sound to suit your taste by pressing the button DSC Adjust the volume using the control VOLUME MIN-MAX. Adjust the volume using the controls VOLUIME ▼ ▲. Display indication: Volume level from 0 to 32.







Create a phenomenal surround sound effect by pressing

NCREDIBLE SURROUND.

→ A light indicates either DBB.JAZZ.POP. several times (DBB is Dynamic Bass Boost).

→ The INCREDIBLE SURROUND button lights up.

Remote control

Note: The effect of INCREDIBLE SURROUND may vary

for ventilation

with different types of music

TUNER: to key in a preset station CD: to key in a track number to select tuner functions to select CD functions Digits 0-9 TUNER

to start and to interrupt CD play

TUNER: to select a radio preset station current/previous or a subsequent track CD: to select the beginning of the to play a CD in random order to stop CD play SHUFFLE

X

to decrease or increase the volume level to open/close the CD tray VOLUME ▼ ▲

- Notes: Always select the desired sound source first and then press the required function key. Numbers consisting of two figures must be keyed in within 2 seconds.
 - DISC UP has no function with this set.

BASIC FUNCTIONS

TROUBLESHOOTING

WARNING

Under no circumstances should you try to repair the set yourself, as this will invalidate the guarantee.

If a fault occurs, first check the points listed below before takeing the set for repair.

If you are unable to remedy a problem by following these hints, consult your dealer or service center.

Problem	Possible cause	Solution		
No sound / no power	 VOLUME is not adjusted Headphones are connected Speakers are not or wrongly connected Mains cable is not securely connected Batteries are exhausted Batteries are incorrectly inserted Changing over from mains to battery supply without removing the plug 	 Adjust the VOLUME Disconnect headphones Check speaker connection Connect the mains cable properly Replace batteries Insert the batteries correctly Pull out the power plug from the unit's AC MAINS inlet 		
No reaction to operation of any keys	- Electrostatic discharge	- Disconnect the set from power supply reconnect it after a few seconds		
Poor radio reception	 Weak radio antenna signal Interference caused by the vicinity of electrical equipment like TVs, video recorders, computers, engines, etc. 	 Aim the antenna for optimum reception FM/SW: incline and rotate telescoping antenna AM/MW/LW: rotate the entire set Keep the radio away from electrical equipment 		
no d 15E or Error indication	 - The CD is badly scratched or dirty - No CD is inserted - The CD is inserted upside down - The laser lens is steamed up 	 Replace or clean the CD, see maintenance Insert a CD Insert a CD with label upwards Wait until the lens has cleared of 		
The CD skips tracks	- The CD is damaged or dirty - shuffle or program is active	- Replace or clean the CD - Switch off shuffle or program play		
Poor cassette sound quality	 Dust and dirt on the heads, capstan or pressure roller Use of not suited cassette types (METAL or CHROME) 	 Clean the heads, capstan and pressure roller, see maintenance Only use NORMAL cassettes for recording 		
Recording does not work	- Cassette tab(s) may be broken out	- Apply a piece of adhesive tape over the missing tab space		
Remote control does not function properly	Batteries are incorrectly insertedBatteries are exhaustedDistance to the set is too large	Insert the batteries correctlyReplace batteriesReduce the distance		

(GB) WARNING

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools at this potential.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévite pourrait être considérablement écourtée par le fait qu'aucune précaution nést prise à leur manipulation.

Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfileer le bracelet serti d'une résistance de sécurité.

Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.



D WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD). Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.

Sorgen Sie dafür, daß sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.

Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).

Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen vermindern. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.

Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

Tutti IC e parecchi semi-conduttori sono sensibili aile scariche statiche (ESD).

La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparationi occorre quindi essere collegato allo stesso potenziale che quello della massa delápparecchio tramite un braccialetto a resistenza. Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

Safety components are marked by the symbol A

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisées les pièces de rechange identiques à celles spécifiées. Les composants de sécurité sont marqués

SAFETY



Bei jeder Reparatur sind die geltenden Sicherheitsvor-schriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden.

Sicherheitsbauteile sind durch das Symbol A markiert

Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkeliijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast De Veiligheidsonderdelen zijn aangeduid met het symbool

Le norme di sicurezza estigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati. Componenty di sicurezza sono marcati con A

GB DANGER: Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

CLASS 1 ASER PRODUCT

S Varning!

Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

DK Advarsel!

Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling

FIN Varoitus!

Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen !

After servicing and before returning the set to customer perform a leakage current measurement test from all exposed metal parts to earth ground, to assure no

The leakage current must not exceed 0.5mA.

Pour votre sécurite, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne"

DISMANTLING INSTRUCTIONS

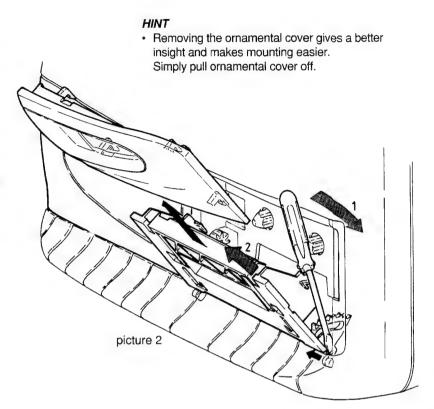
Dismantling of the Cassette Doors

RIGHT DOOR

- · Open cassette door.
- Release right catch by pressing it inwards with a screwdriver as shown in picture 2 (step 1).
- Pull door on right side up as shown in picture 2 (step 2).
- · Left catch will now be released automatically.

LEFT DOOR

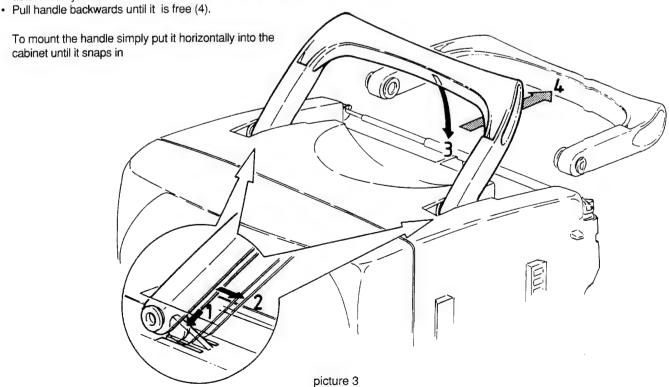
- · Open cassette door.
- Release left catch by pressing it inwards with a screwdriver as shown in picture 2 (step 1) for the right door.
- · Pull door on left side up.
- · Right catch will now be released automatically.



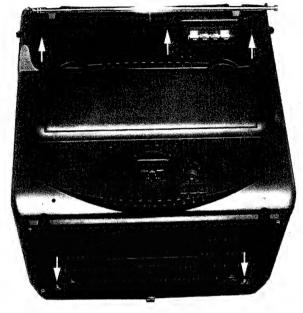
Dismantling of the Carrying Handle

- · Turn handle upright first.
- Press catch ribs a little bit downwards (1) and pull handle backwards until catch ribs are hold in a slightly lower position (2).
- Now turn handle completely down (3)

 catch ribs will now
 automatically be bent downwards and release the handle.



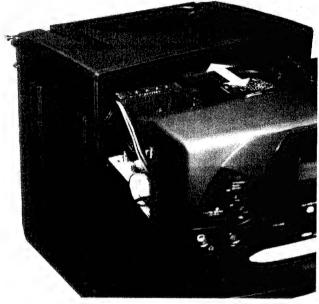
DISMANTLING INSTRUCTIONS



picture 4

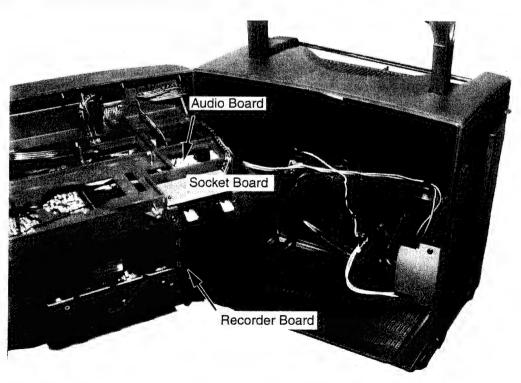
Separation Front - Rear Cabinet

- loosen 5 screws as shown in picture 4.split cabinet parts as shown in picture 5.



picture 5

Now the set is in service position for repairs on componentside of Audio Board and Recorder Module



picture 6

SERVICE HINTS

SERVICE TOOLS

TORX T10 screwdriver with shaftlength 150mm TORX screwdriver set SBC 163	
Audio signal disc SBC 429 Playability test disc SBC444 Test disc 5 (disc without errors) + Test disc 5A (disc with dropout errors, black spots and fingerprints)	4822 397 30184 4822 397 30245
SBC 426/426A	
Universal test cassette Fe SBC 420	4822 397 30071

CIRCUIT DESCRIPTION

For circuit description of the CD part we refer to

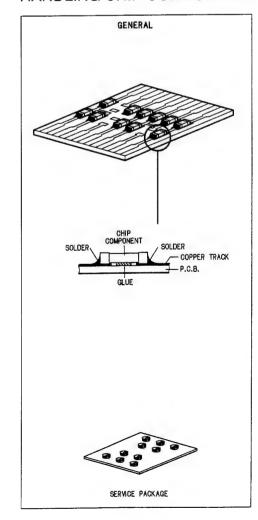
CIRCUIT DESCRIPTION CD93 PART I (4822 725 24041)

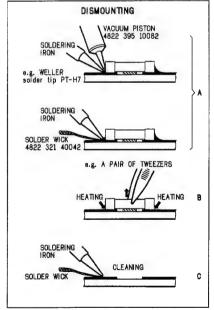
chapter 2.2 : TDA1301(DSIC2: Digital Servo IC)

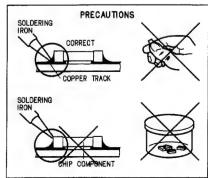
CIRCUIT DESCRIPTION New key components of CD 94 program (4822 725 25233)

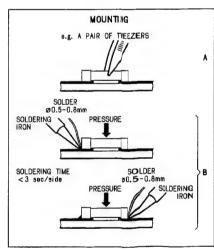
chapter 3: CD6 decoder SAA7345

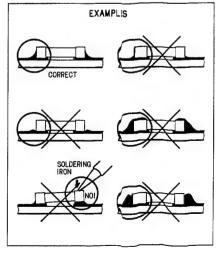
HANDLING CHIP COMPONENTS





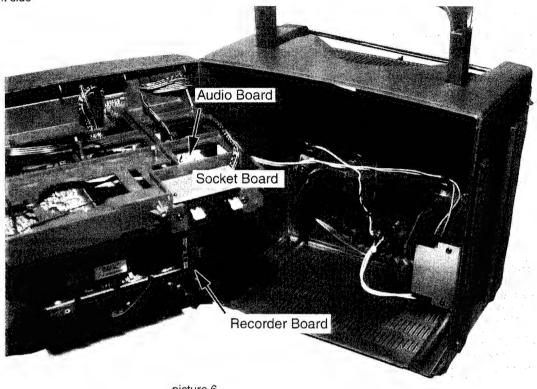






CONTRACTOR OF BUILDING SECTION OF THE TOP AND THE SECTION OF THE S

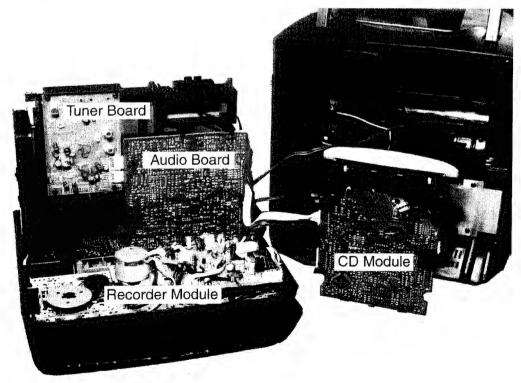
- Repairs on
 Audio Board component side
- Recorder Module



picture 6

Turn Front cabinet face down for repairs on

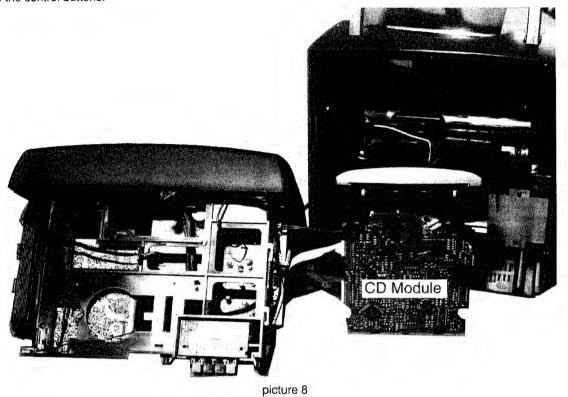
- Tuner board, component side Recorder Module
- · Audio board, copper side (remove CD Module by loosening 2 screws).



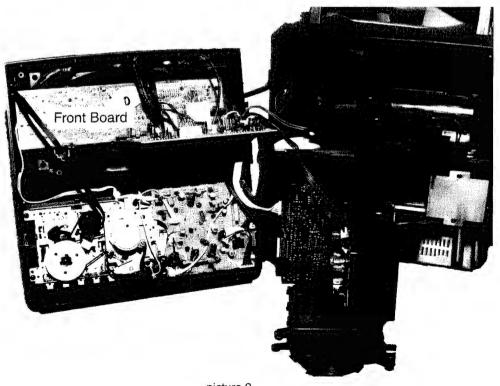
picture 7

SERVICE HINTS

Repairs on CD Module
Positioning of Front cabinet as shown in picture 8 enables access to the control buttons.

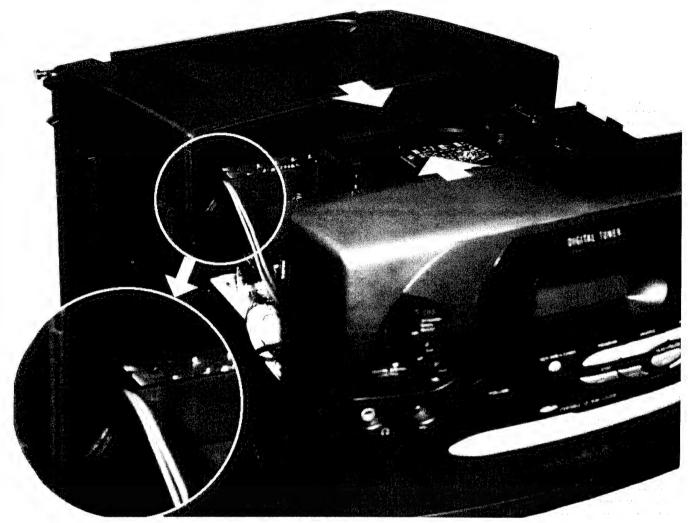


Repairs on Front Board (remove support frame first)



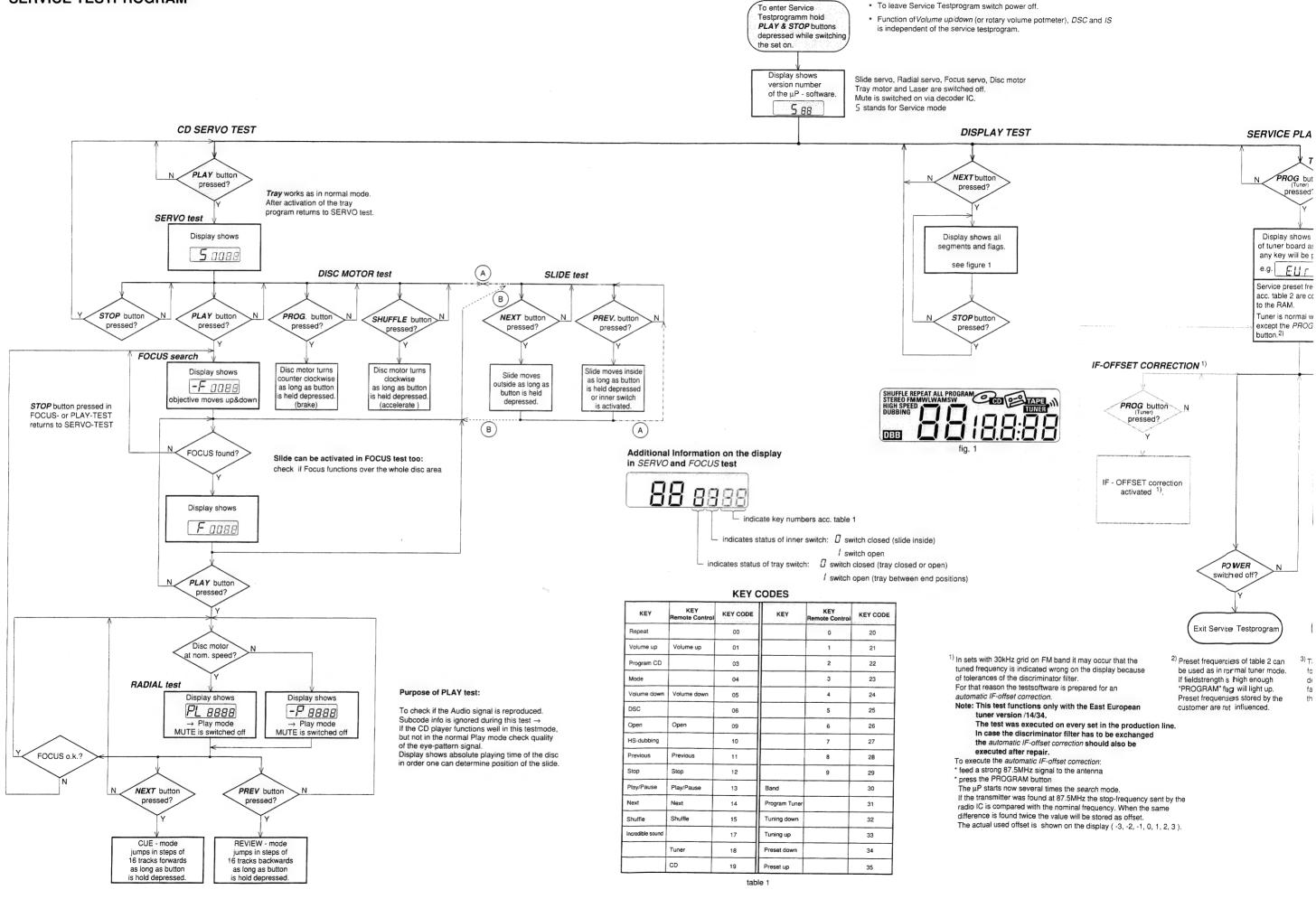
SERVICE HINTS ASSEMBLY

Assembling the set after repairsPay attention on wire routing as shown in picture 10.

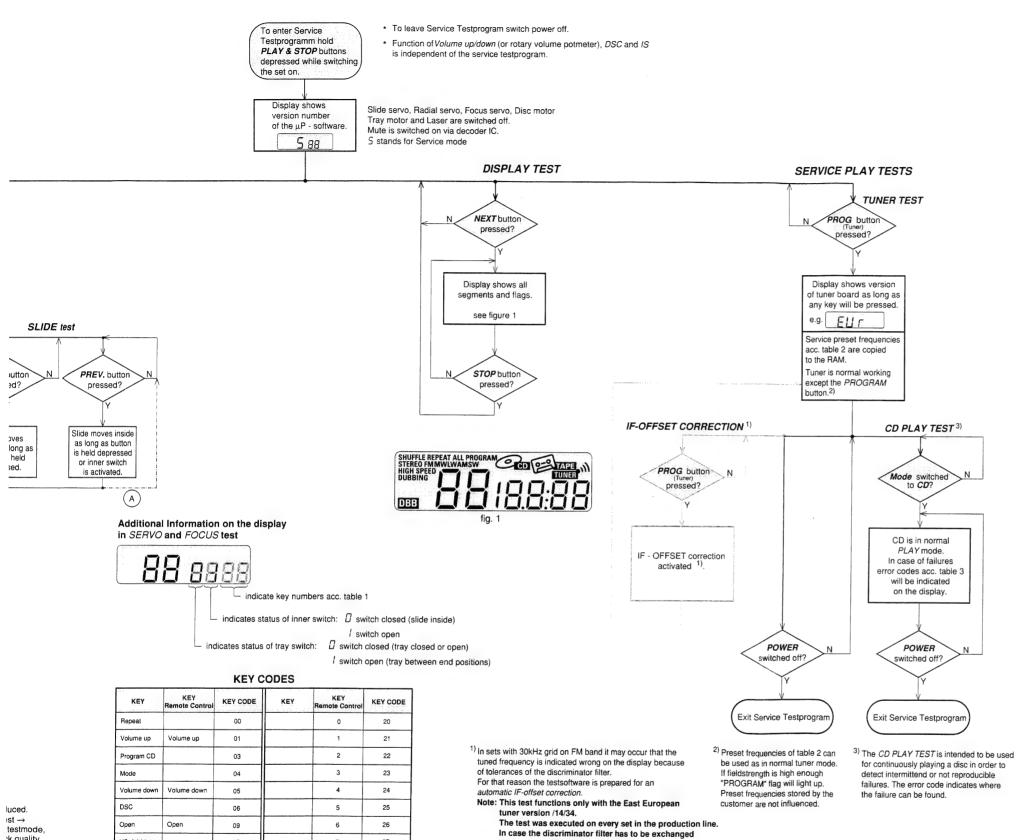


picture 10

SERVICE TESTPROGRAM



19834856



the automatic IF-offset correction should also be

If the transmitter was found at 87.5MHz the stop-frequency sent by the

The actual used offset is shown on the display (-3, -2, -1, 0, 1, 2, 3).

radio IC is compared with the nominal frequency. When the same

difference is found twice the value will be stored as offset.

executed after repair.

To execute the automatic IF-offset correction:

* press the PROGRAM button

feed a strong 87.5MHz signal to the antenna

The μP starts now several times the *search* mode.

k quality

of the disc

of the slide.

HS-dubbing

Play/Pause

ncredible sound

Stop

Play/Pause

Shuffle

Tuner

CD

Stop

Shuffle

10

11

12

13

15

19

Band

Program Tuner

Tuning down

Tuning up

Preset down

Preset up

table 1

27

28

29

30

31

32

33

34

35

9

SERVICE PRESET FREQUENCIES

	EUr	EE U-88	US я	05 E	05 s	НОГ	JR P
REGION	EUROPE FM/MW/LW	East EUROPE FM/MW/LW	USA FM/MW	OVERSEAS FM/MW 4)Grid switchable	OVERSEAS FM/MW/SW 4)Grid switchable	KOREA FM/MW-stereo	JAPAN FM/MW-stereo
PRESET	/00/05/20/25	/14/34	/17/37	10-100kHz/9-50kHz /01/21	10-100kHz/9-50kHz /11/31	/13/33	/06/26
1	87,5 MHz	65,81 MHz	87,5 MHz	87,5 MHz	87,5 MHz	87,5 MHz	76 MHz
2	108 MHz	108 MHz	108 MHz	108 MHz	108 MHz	108 MHz	107,75 MHz (Сн з)
3	531 kHz	74 MHz	530 kHz	530/531 kHz	530/531 kHz	531 kHz	90 MHz
4	1602 kHz	87,5 MHz	1700 kHz	1700/1602 kHz	1700/1602 kHz	1602 kHz	95,75 MHz (CH 1)
5	558 kHz	531 kHz	560 kHz	560/558 kHz	560/558 kHz	558 kHz	101,75 MHz (CH 2)
6	1494 kHz	1602 kHz	1500 kHz	1500/1494 kHz	1500/1494 kHz	1494 kHz	531 kHz
7	153 kHz	558 kHz	98MHz	98/87,5MHz	98/3,9 MHz		1602 kHz
8	279 kHz	1494 kHz			87,5/12,1 MHz		558 kHz
9	198 kHz	153 kHz			87,5/4,2 MHz		1494 kHz
10	98MHz	279 kHz			87,5/11 MHz		80MHz
11		198 kHz		87,5/98MHz	87,5/98MHz	98MHz	

table 2

4) To toggle frequency grid press **BAND** button for more than 5s in normal tuner mode (**not** in service testmode). Display will show either 9 5 d or 10 5 d for 2 s.

CD ERROR codes

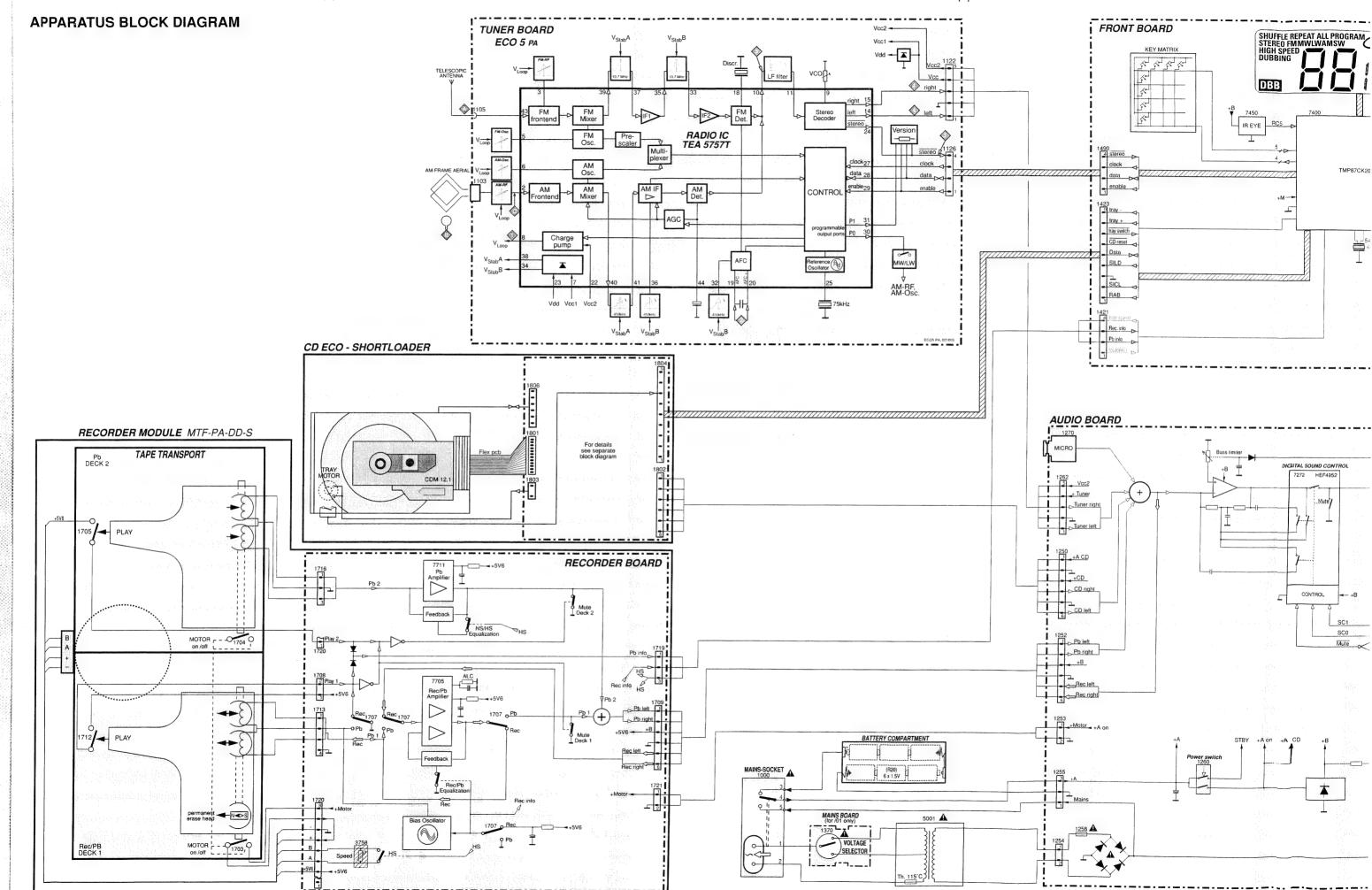
Error number	Error description	Error type			
E 1002	Focus Error Triggered when the focus could not be found within a certain time when starting up the CD or when the focus is lost for a certain time during playing the CD.				
E 1007	Subcode Error No subcode could have been read, even not after retrying 10 times to restart the PLL and jumping 10 tracks. When this happens the servo is stopped and restarted (as if the user would have pressed STOP and then PLAY immediately) to recover.	w			
E 1008	Out of lead-in during reading TOC Triggered when during reading the TOC the lead-in (track no. 0) is left. This can be caused by a misaligned inner-switch or by a disc with a mispositioned lead-in.	w			
E 1010	Radial error Triggered when the radial servo is not on track for a certain time during playing the CD.				
E 1011	Slide error Generated when the inner-switch did not open within a certain time when the pick up is moved from the inner position outside.				
E 1012	Fatal slide error Generated when the inner-switch did not close within a certain time when the pick up is moved inside. Inner-switch or slide motor problems.	F			
E 1013	Turntable motor error Generated when the CD did not reach 75% of speed during startup within a certain time. Discmotor problem.	F			
E 1014	Too less offtracks. Triggered when the servo processor counts too less tracks in a defined time during JUMPS. This can be caused by a disturbed HF-signal (the tracks cannot be recognized exactly) or slide motor problems.	w			
E 1020	PLL lock error When the PLL did not lock after 10 retries then this warning message is generated and the servo is stopped and restarted (as if the user would have pressed STOP and then PLAY immediately) to recover.	w			

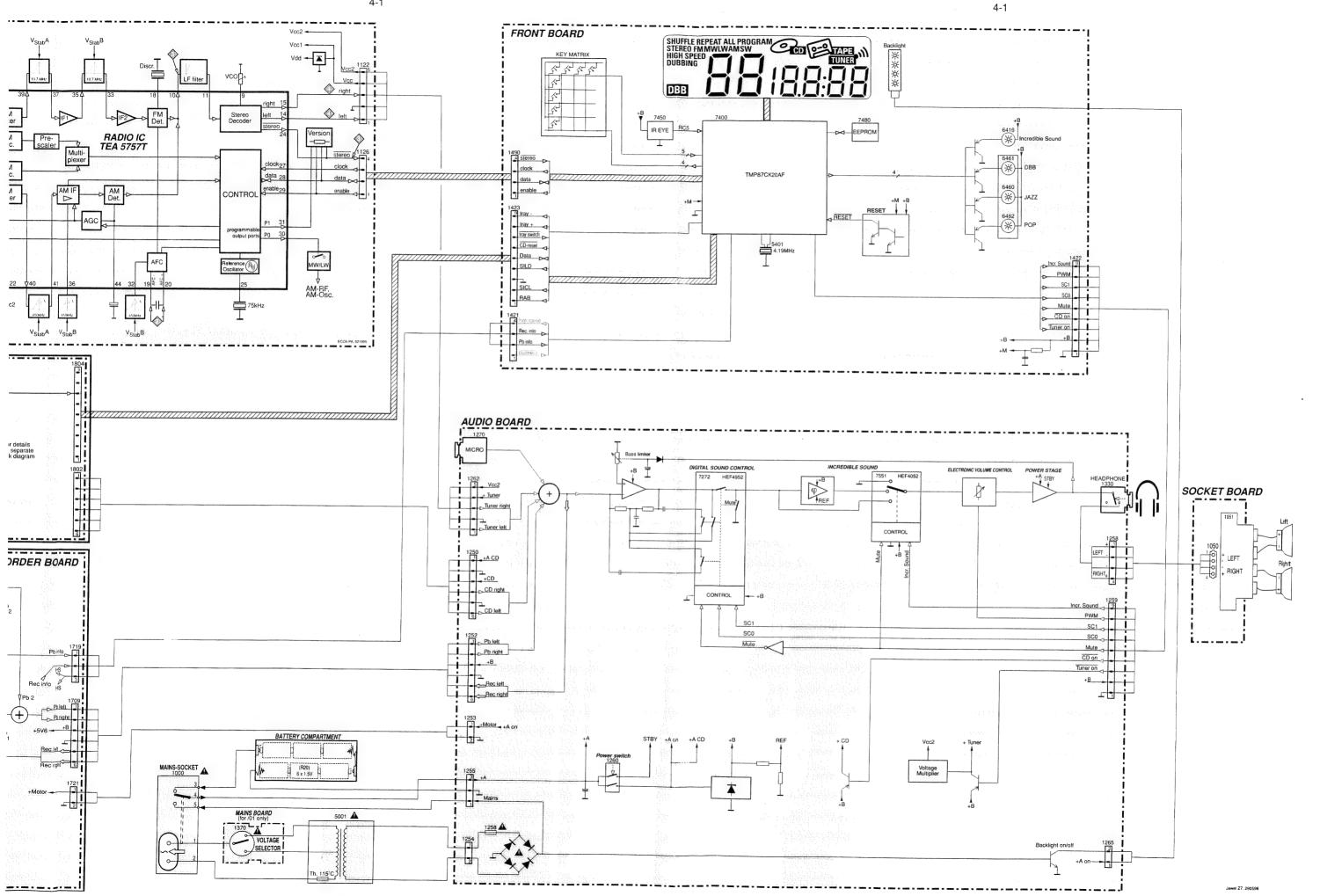
table 3

Error type: W = Warning \rightarrow set continues operation, message remains on the display until next error occurs or any key is pressed.

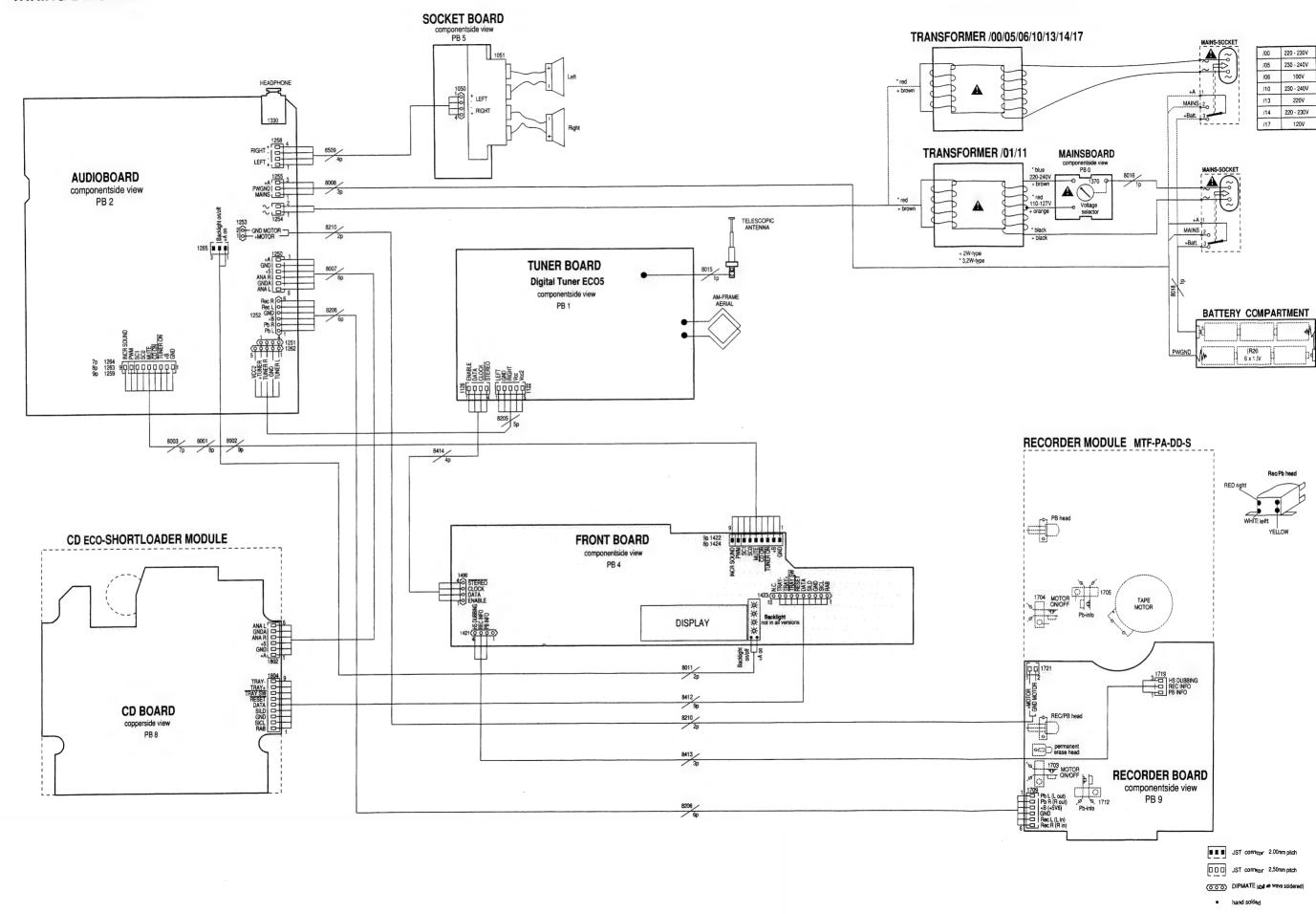
(If the set does not function after 10 retries Warning changes to Fatal Error)

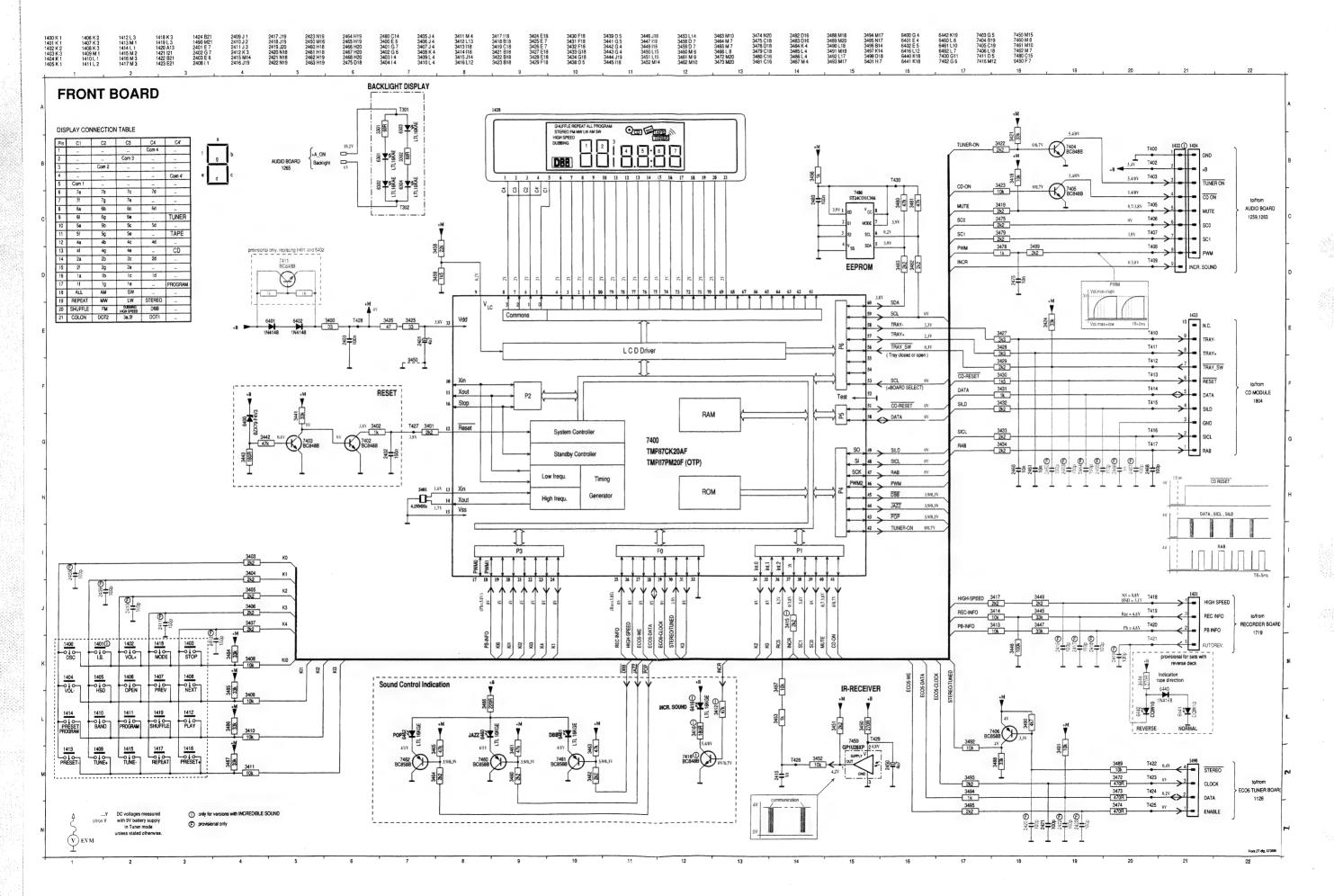
F = Fatal Error → set stops operation, message remains on the display. (The set can only be operated again via a reset)



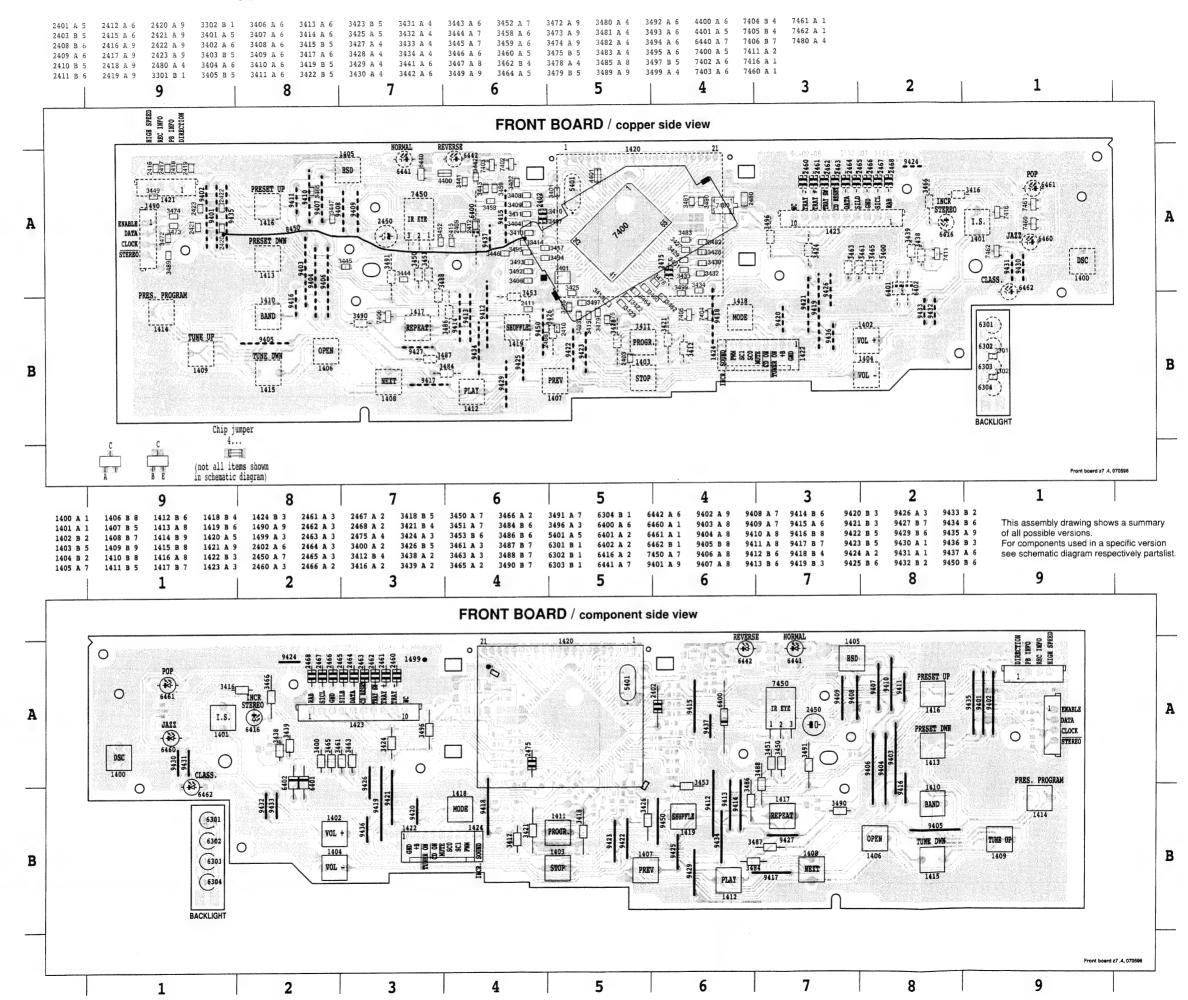




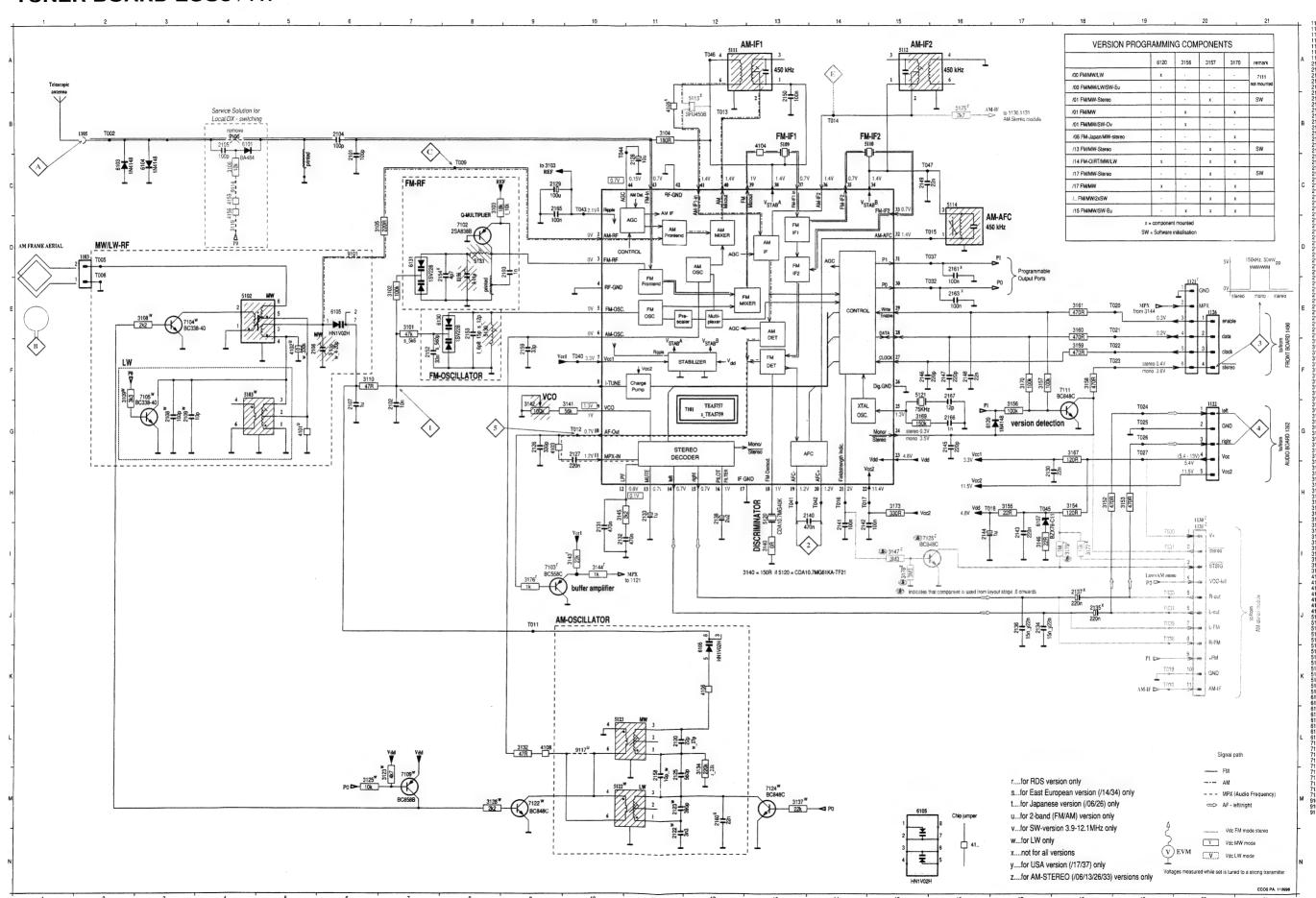


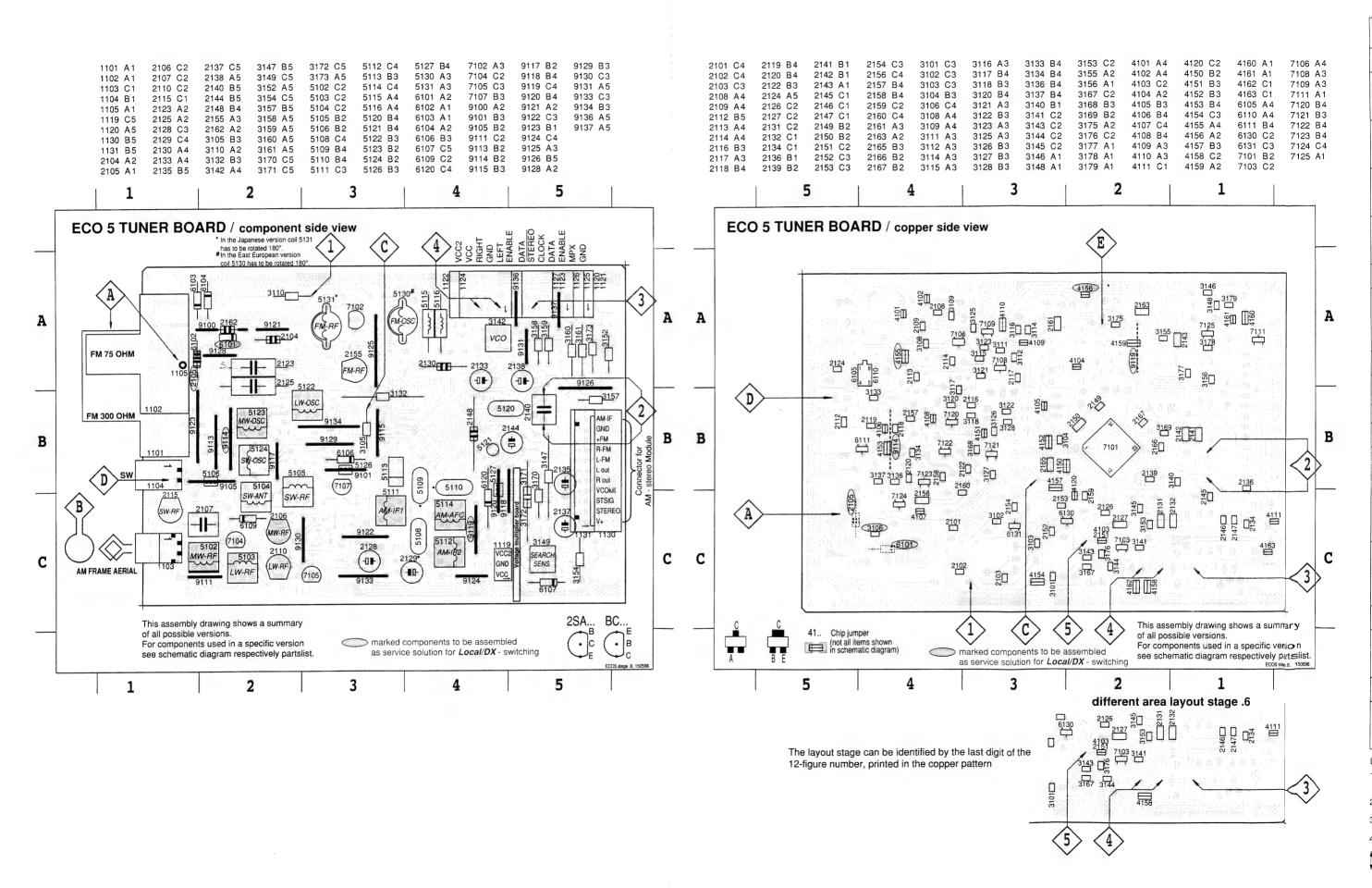


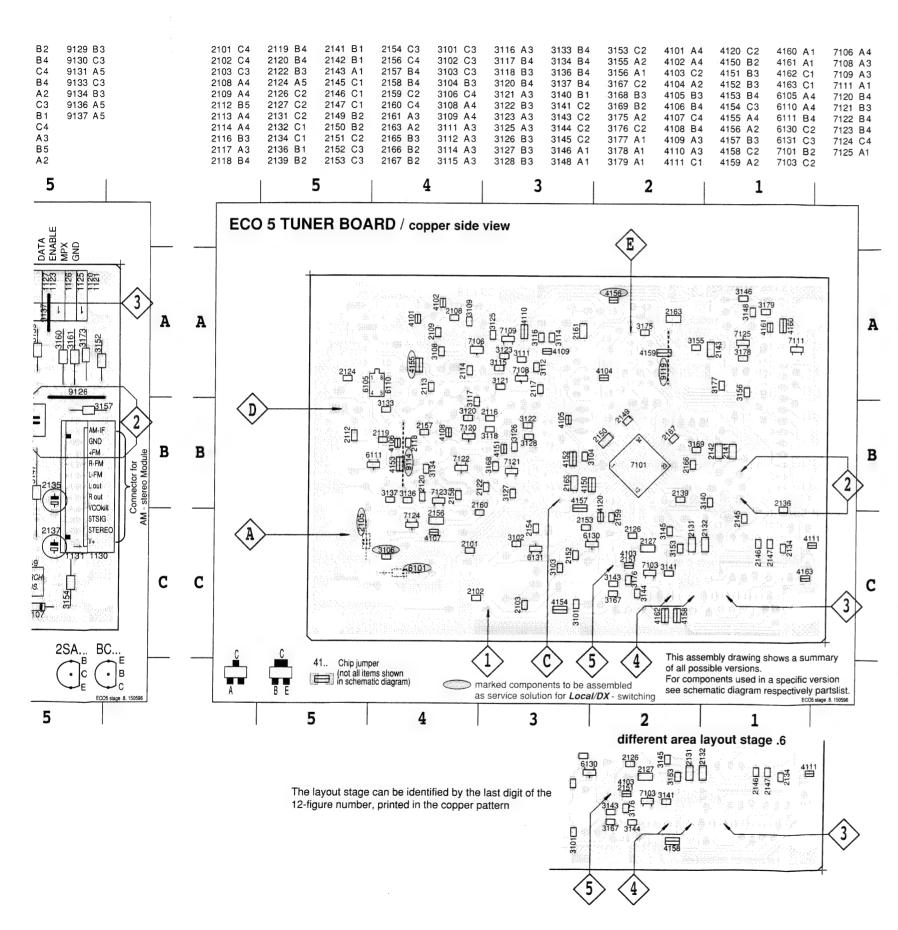




TUNER BOARD ECO5 / PA







TUNER ADJUSTMENT TABLE (ECO5 FM/MW- and FM/MW/LW - versions with AM-frame aerial)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNME	ENT	Programme & Commence of the		Land the same	Line of provided and a con-	The state of the s
FM			108MHz	5130		8V ±0.2V
87.5 - 108MHz			87.5MHz	check		4.3V ±0.5V
MW			1700kHz	5123		8V ±0.2V
FM/AM-version, 10kHz grid 530 - 1700kHz			530kHz	check		1.1V ±0.4V
LW] [279kHz	5122		8V ±0.2V
153 - 279kHz			153kHz	check		1.1V ±0.4V
MW FM/MW/LW- and FM/MW-version			1602kHz	5123		8V ±0.2V
(9kHz grid) 531 - 1602kHz			531kHz	check		1.1V ±0.4V
FM RF		•		-	des.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-
FM	108MHz	(A)	108MHz	2155	4	
87.5 - 108MHz	87.5MHz	mod=1kHz Δf=±22.5kHz	87.5MHz	5131		MAX
VCO		1			L	
FM	98MHz, 1mV	(A)	98MHz	3142	3>	152kHz ±1kHz ¹⁾
AM IF						
MW	450kHz	<u>\$\langle\$</u>	IIC 7101 36 1 100nF	5111		Way.
IVIV	connect pin 26 of IC 7101 (AM Osc.)	$\Delta f = \pm 15 \text{kHz}$ $V_{RF} = 3 \text{mV}$	IC 7101 40 + 100nF see remark 2)	5112	*	f _o symmetric
AM AFC	with short wire to ground (pin 4)	with short wire to			^	
MW		continuous wave		5114	(2)	0 ± 2 mV DC
AM RF ³⁾				-		
MW ⁴⁾ FM/MW/LW- and FM/MW-version	1494kHz	B>	1494kHz	2106		
(9kHz grid) 531 - 1602kHz	558kHz	X	558kHz	5102	4	
LW	198kHz		198kHz	5103		/ \ www.
MW	1500kHz	$\Delta f = \pm 30 \text{kHz}$	1500kHz	2106		10 VIIIIIIIII
FM/AM-version, 10kHz grid 530 - 1700kHz	560kHz	V _{RF} as low as possible	560kHz	5102		symmetric

Use service test program. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

¹⁾ If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)

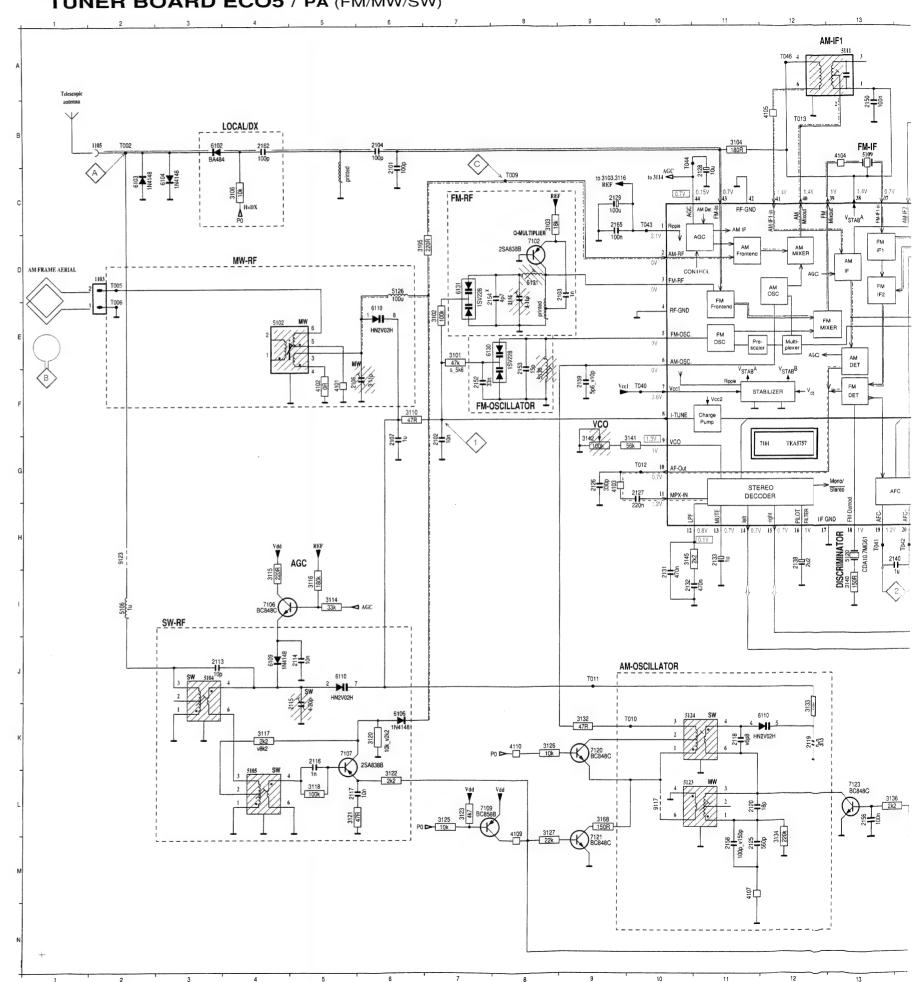
²⁾ RC network serves for damping the IF-filter while adjusting the other one.

³⁾ For AM RF adjustments the original frame antenna has to be used!

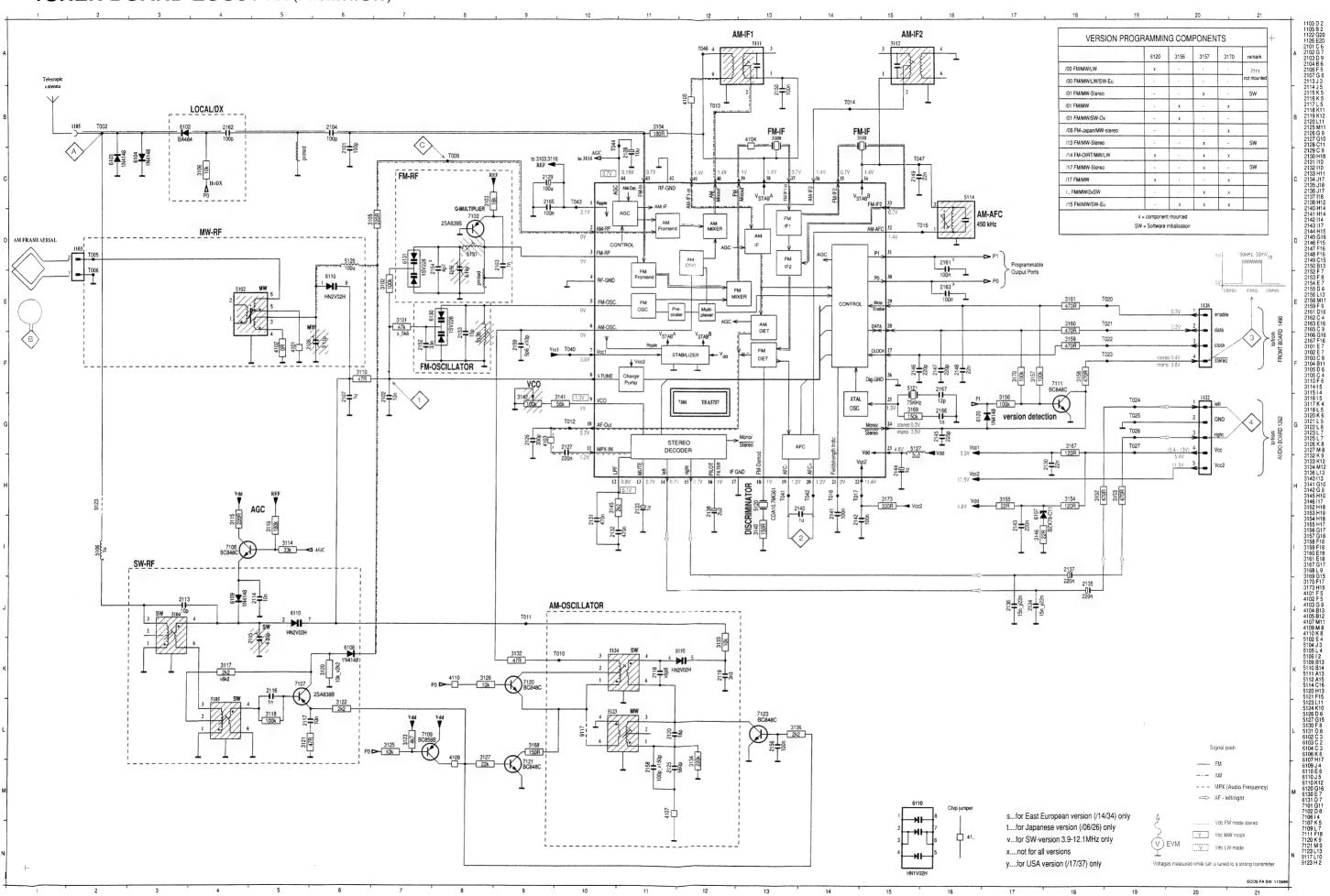
⁴⁾

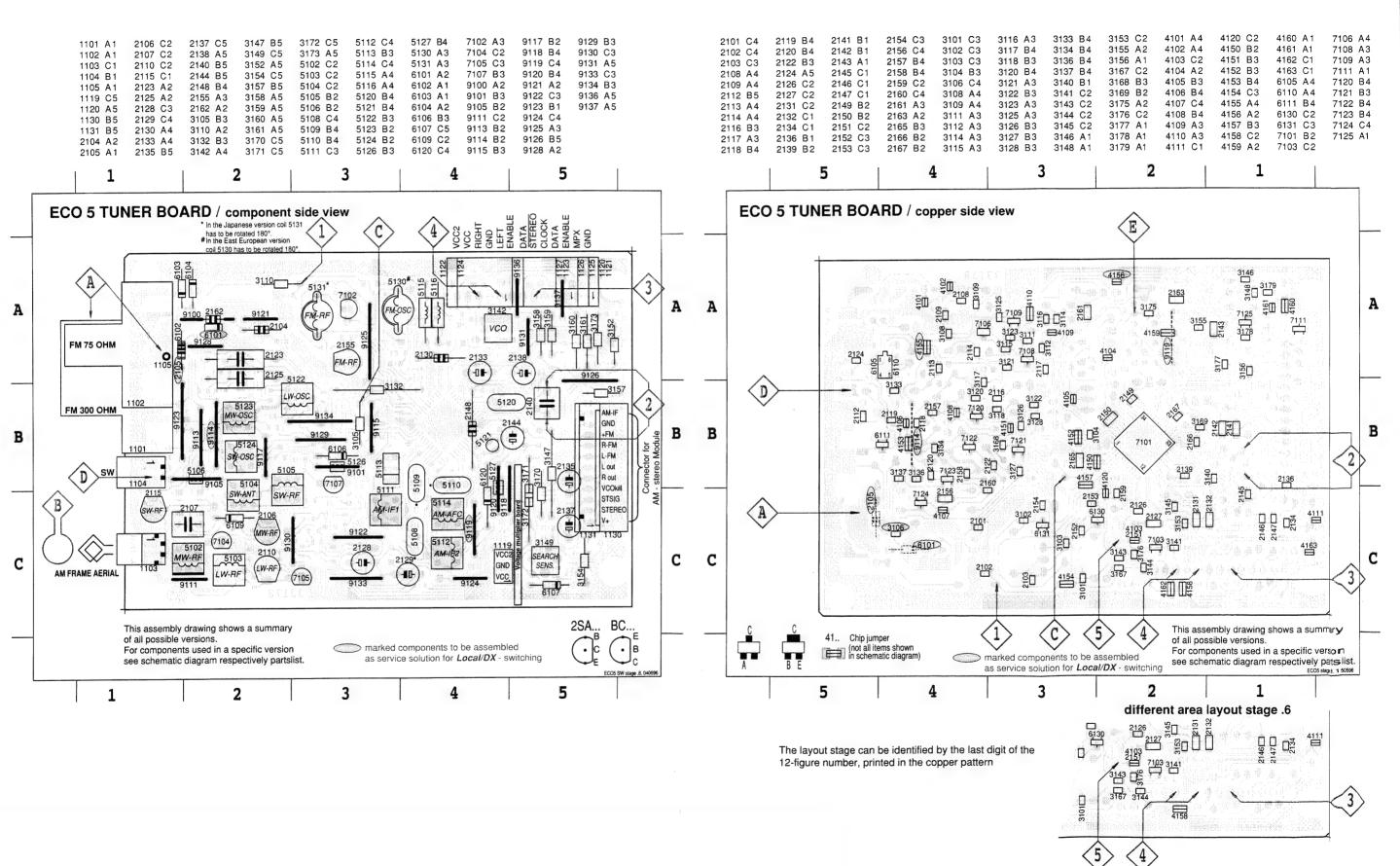
⁴⁾ MW has to be aligned before LW.

TUNER BOARD ECO5 / PA (FM/MW/SW)



TUNER BOARD ECO5 / PA (FM/MW/SW)





TUN

FM

MW 53

SW

FM FM

VC:

AM

ΜW

AM

MIW ———

MW

SW

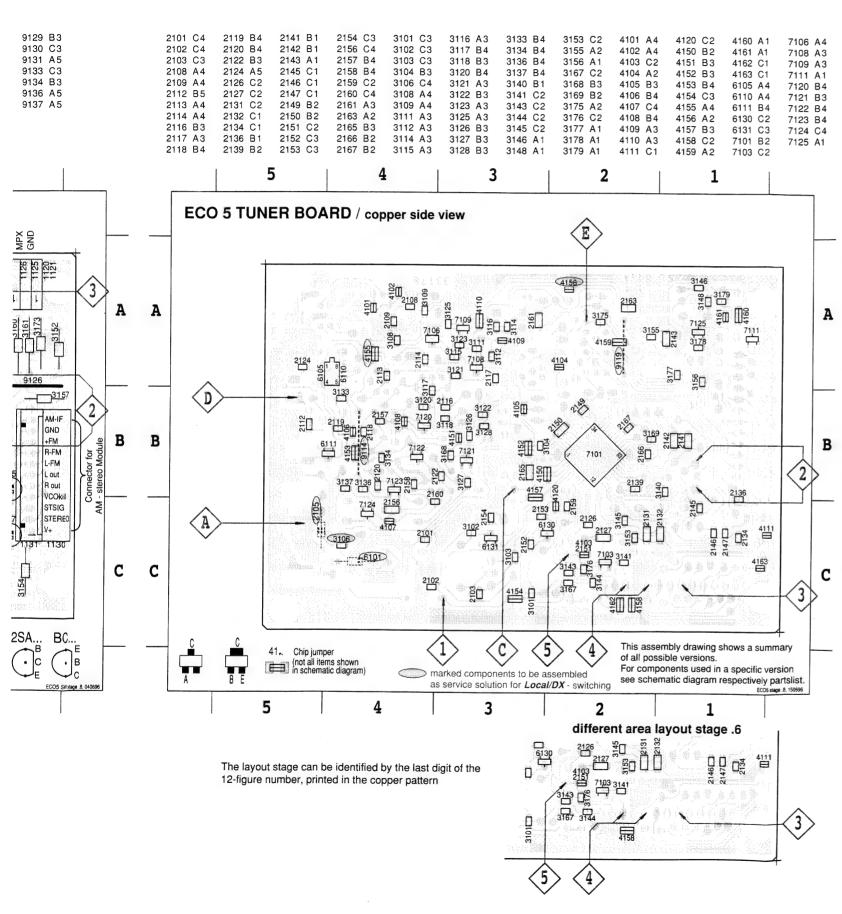
Use s

1) If s
(int
2) RC

3.

Aliç

Rep



TUNER ADJUSTMENT TABLE (ECO5 FM/MW/SW - versions with MW-frame aerial)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNM	IENT					
FM			108MHz	5130		8V ±0.2V
87.5 - 108MHz			87.5MHz	check		4.3V ±0.5V
MW			1700kHz	5123		8V ±0.2V
530 - 1700kHz			530kHz	check		1.1V ±0.4V
SW			12.1MHz	5124		8V ±0.2V
3.9 - 12.1MHz			3.9MHz	check		1.1V ±0.4V
FM RF				-		
FM	108MHz	(A)	108MHz	2155		
87.5 - 108MHz	87.5MHz	mod=1kHz Δf=±22.5kHz	87.5MHz	5131	4>	MAX
VCO			•		<u> </u>	
FM	98MHz, 1mV continuous wave	A A	98MHz	3142	3>	152kHz ±1kHz ¹⁾
AM IF				!	L	<u></u>
MW	450kHz	⟨Ĉ⟩	IC 7101 36 100nF	5111	\wedge	×
MAA	connect pin 26 of IC 7101 (AM Osc.)	$\Delta f = \pm 15 \text{kHz}$ $V_{RF} = 3 \text{mV}$	IC 7101 40 1 100nF see remark 2) 8	5112	4	f _o mmin symmetric
AM AFC MW	with short wire to ground (pin 4)	continuous wave		5114	2	0 ± 2 mV DC
AM RF ³⁾		J			·	
MW	1500kHz	B	1500kHz	2106		
530 - 1700kHz	560kHz		560kHz	5102		
		Δf = ±30kHz V _{RF} as low as possible			4	u a a x
SW 4)	11MHz	10pF A	11MHz	2115		f _o """"" symme⊩ic
3.9 - 12.1MHz	4.2MHz		4.2MHz	5105		

Use service test program. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

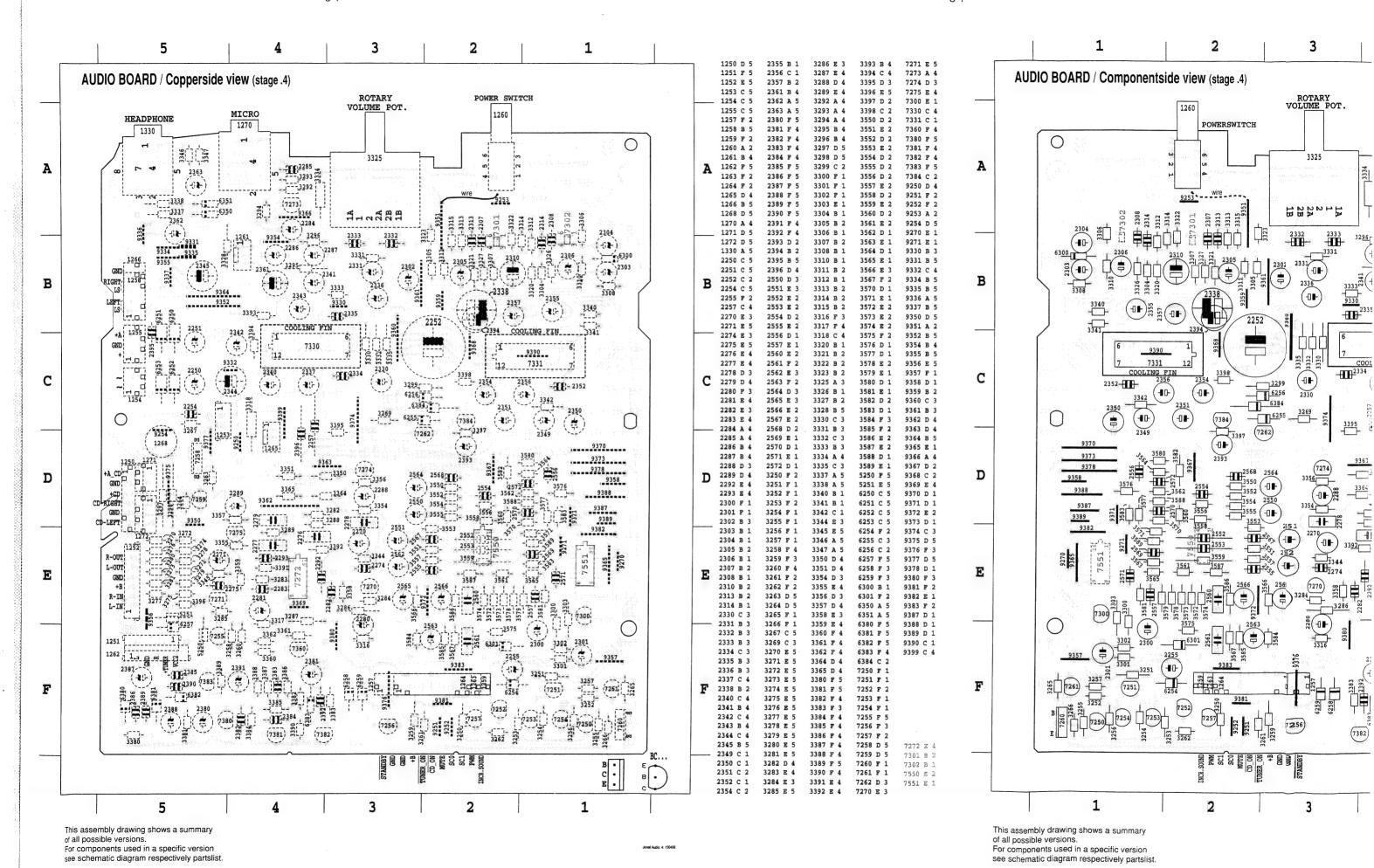
If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)

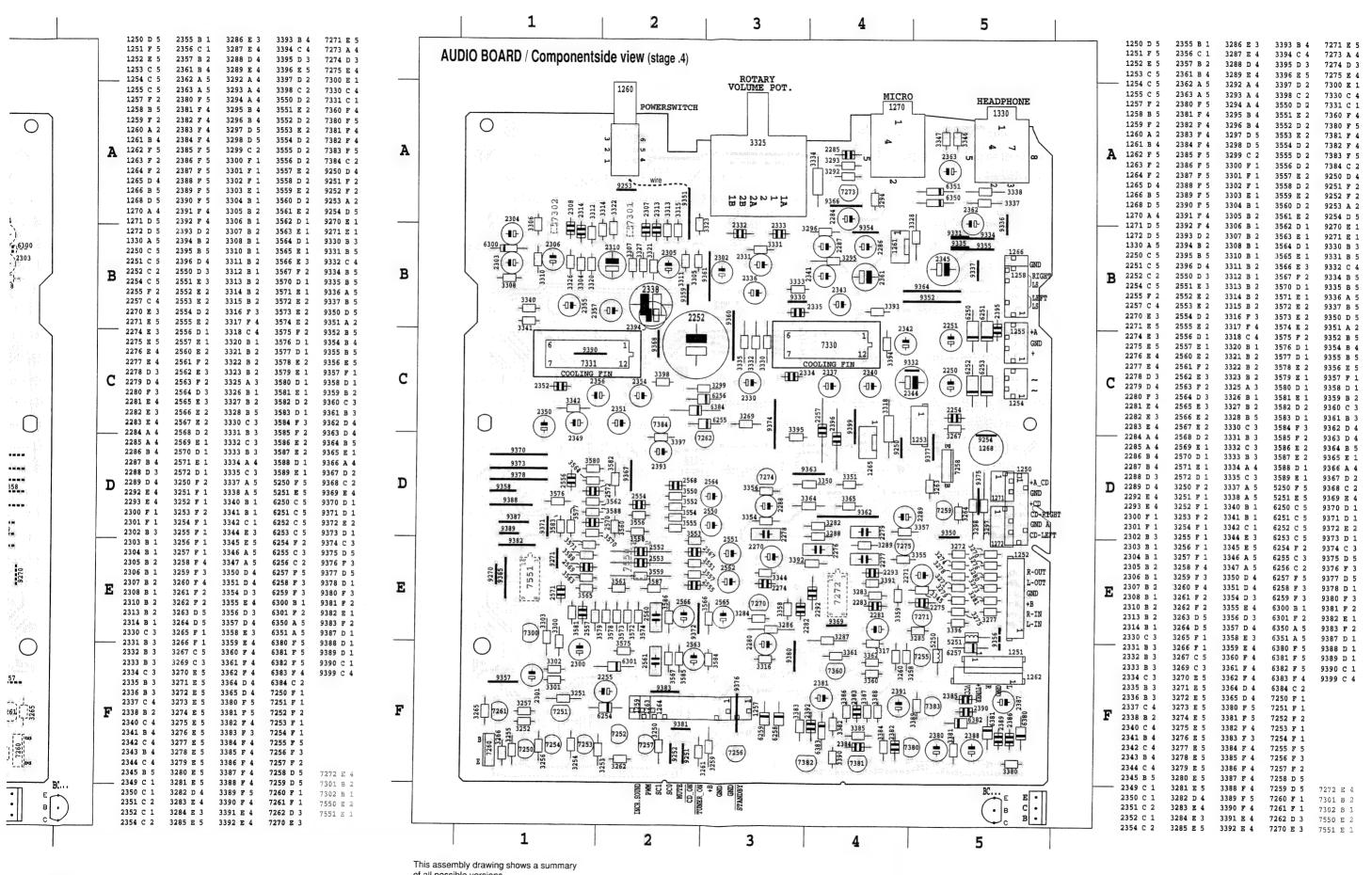
²⁾ RC network serves for damping the IF-filter while adjusting the other one.

 $^{^{3)}}$ For MW adjustments the original frame antenna has to be used !

⁴⁾ Align 5104 to max. inductivity first (core completely screwed in).

Repeat



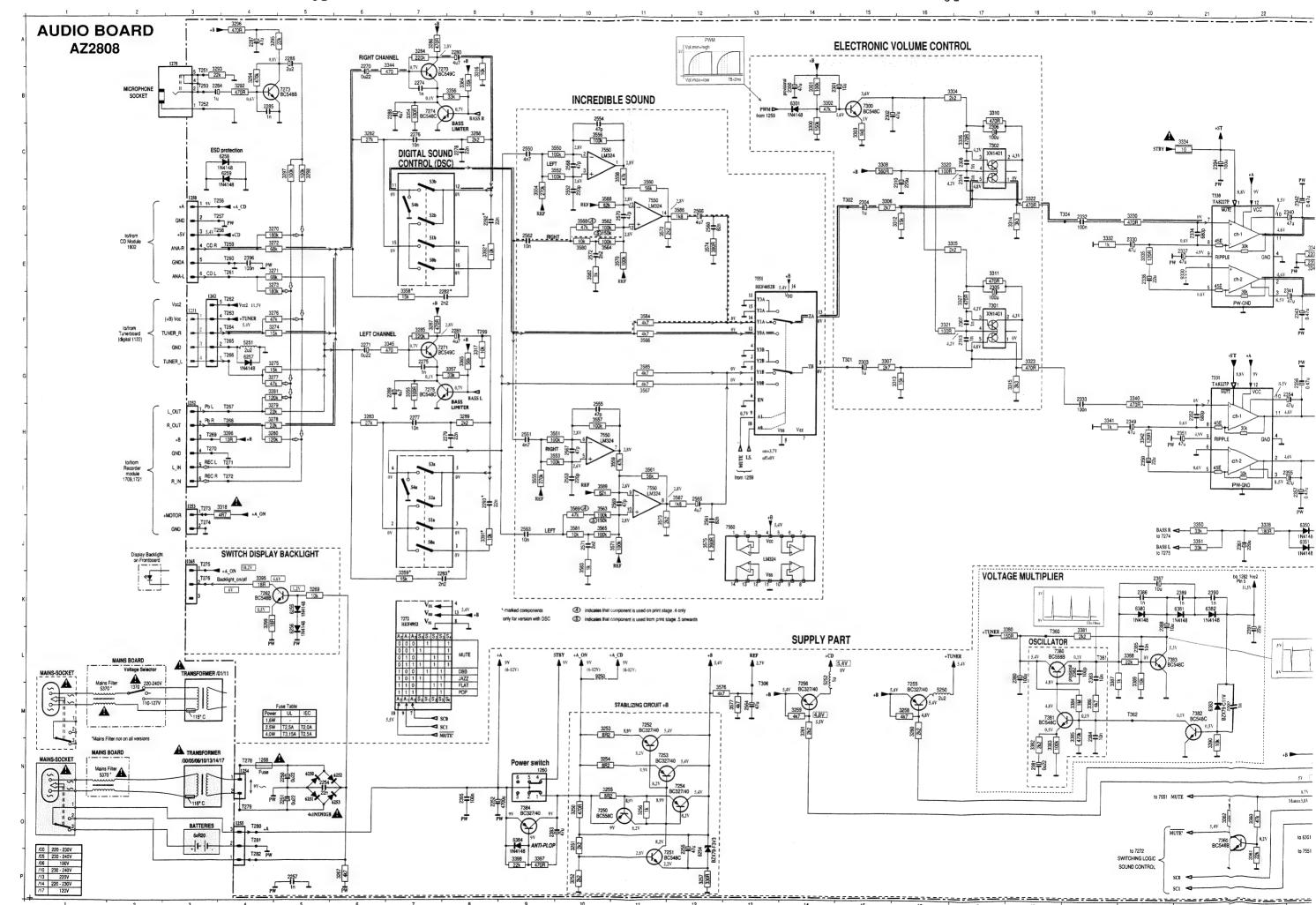


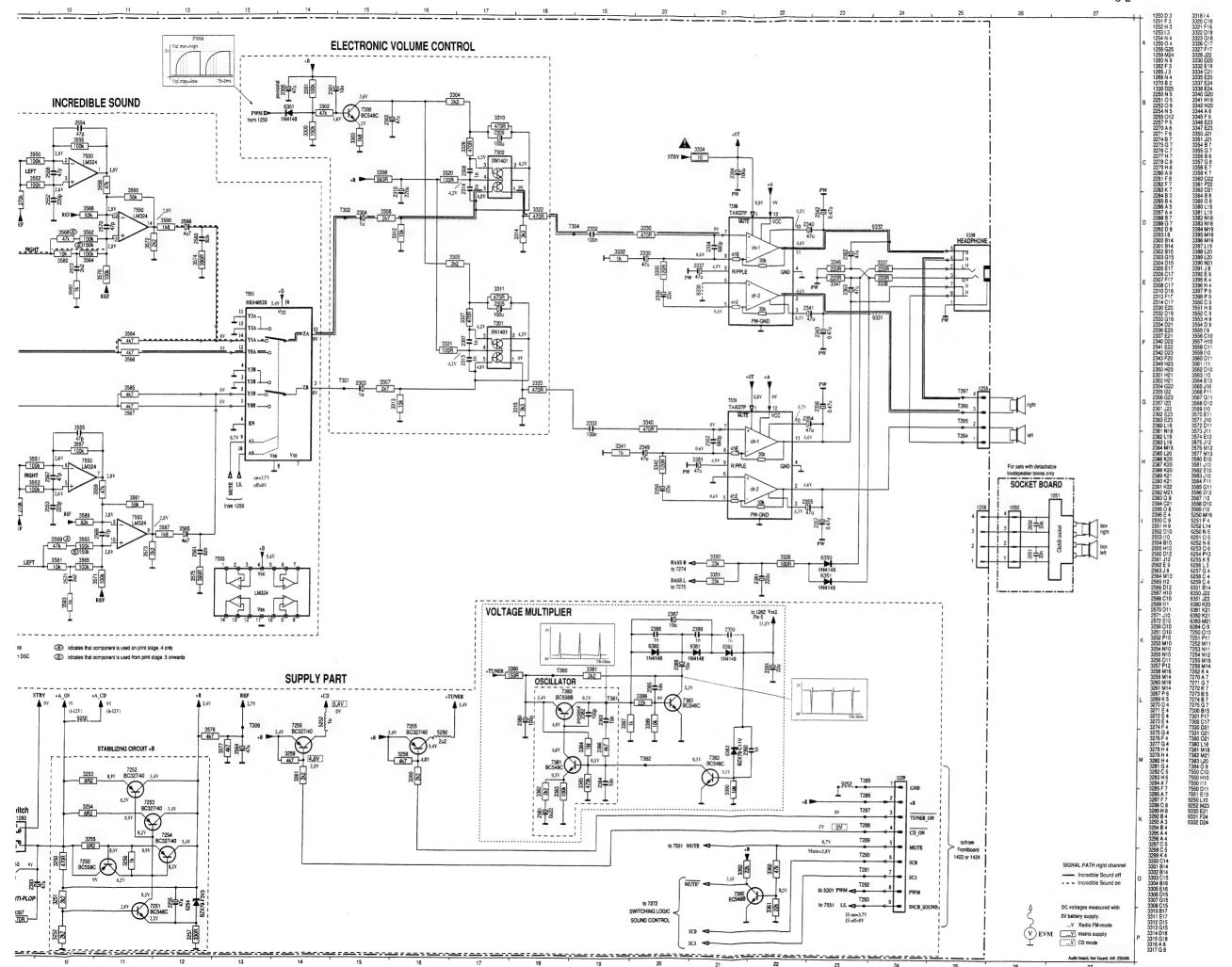
Inis assembly drawing shows a summary of all possible versions. For components used in a specific version see schematic diagram respectively partslist

Jewel Audio ,4, 198496

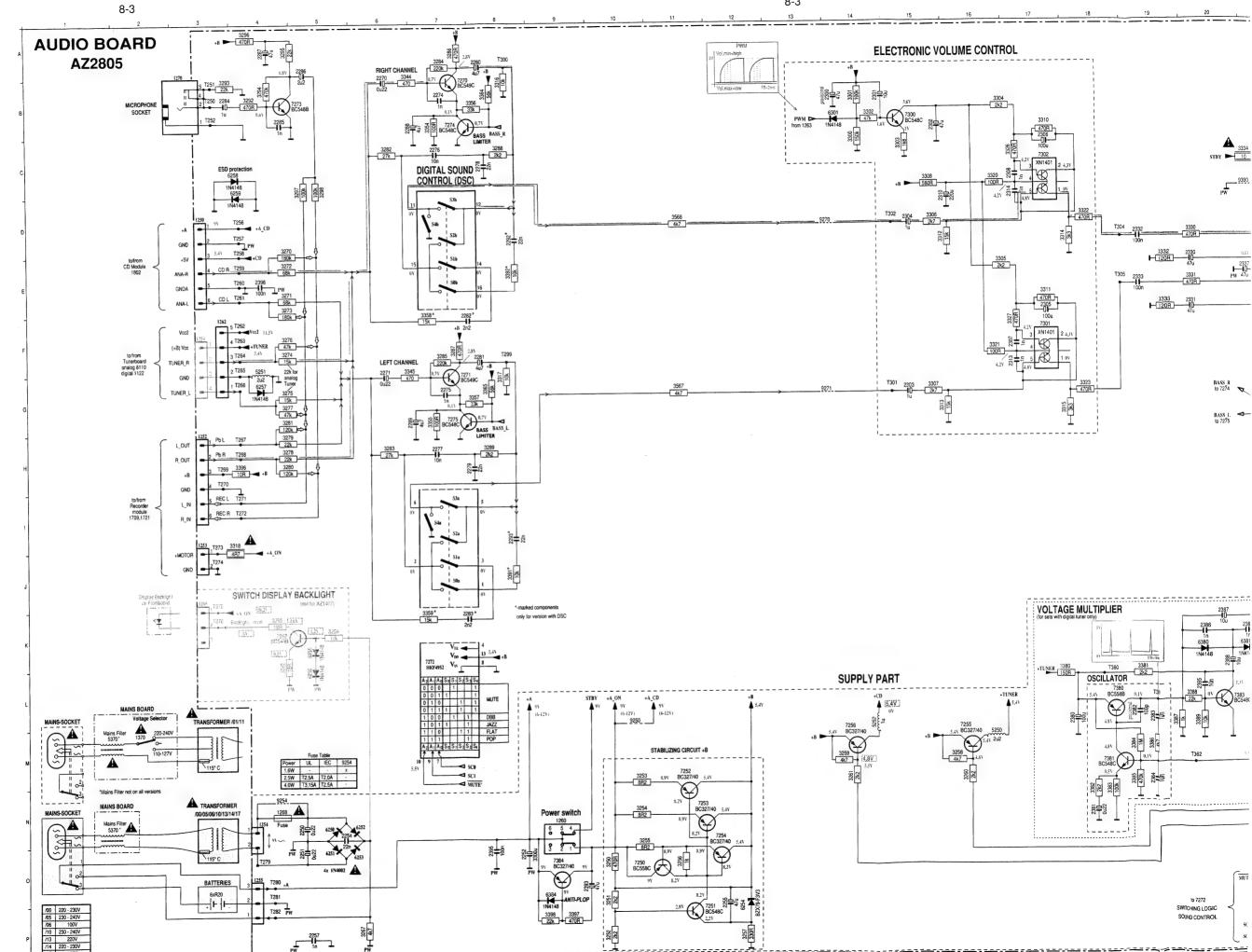
Jevret Auto 4, 190496

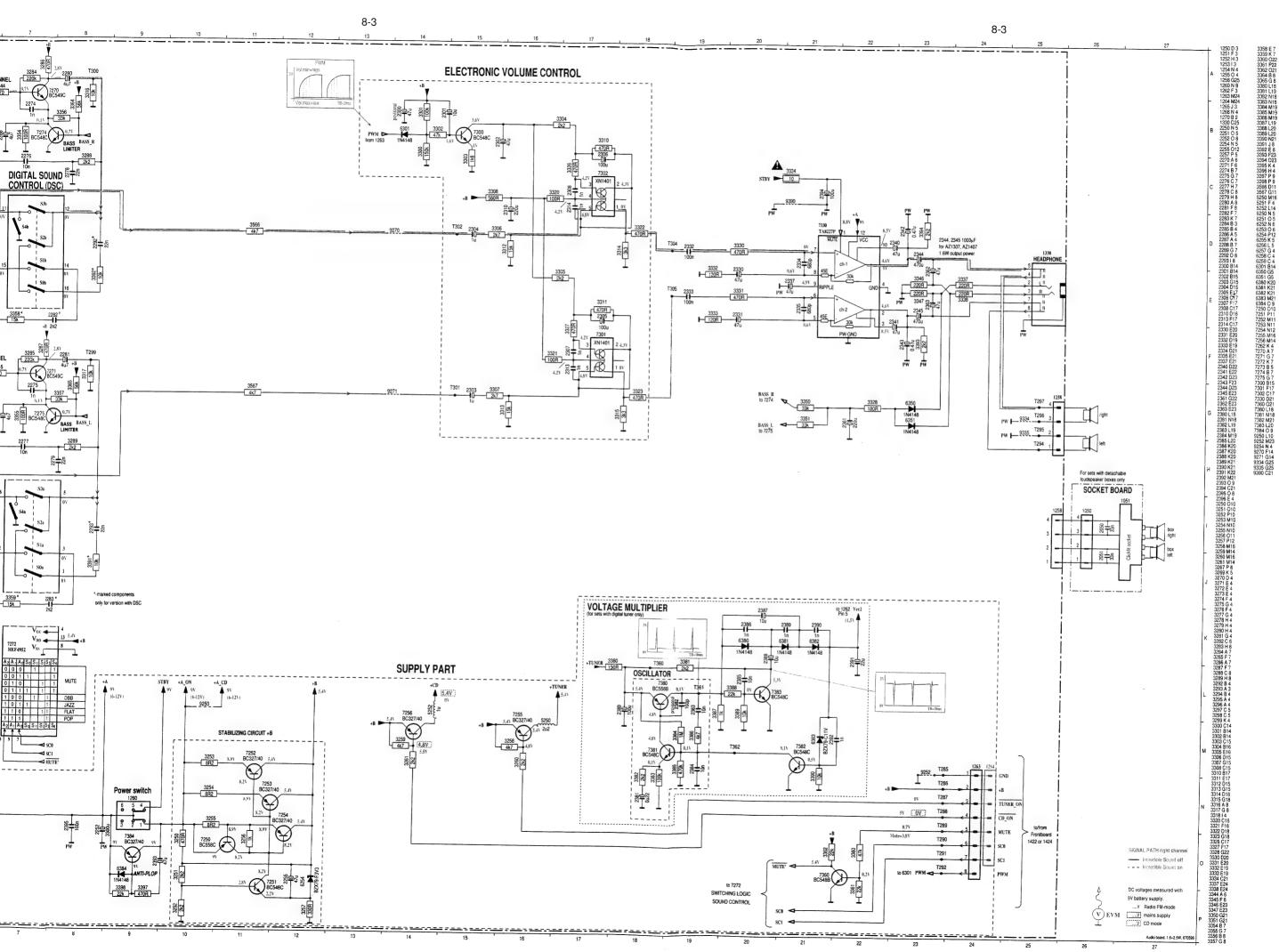
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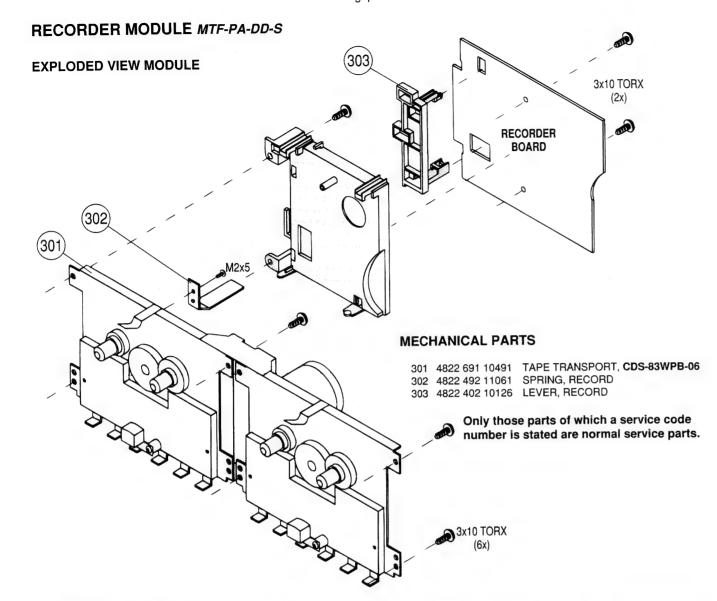






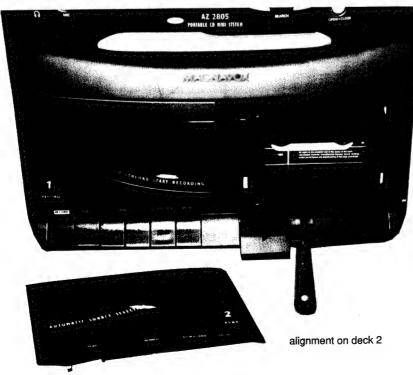




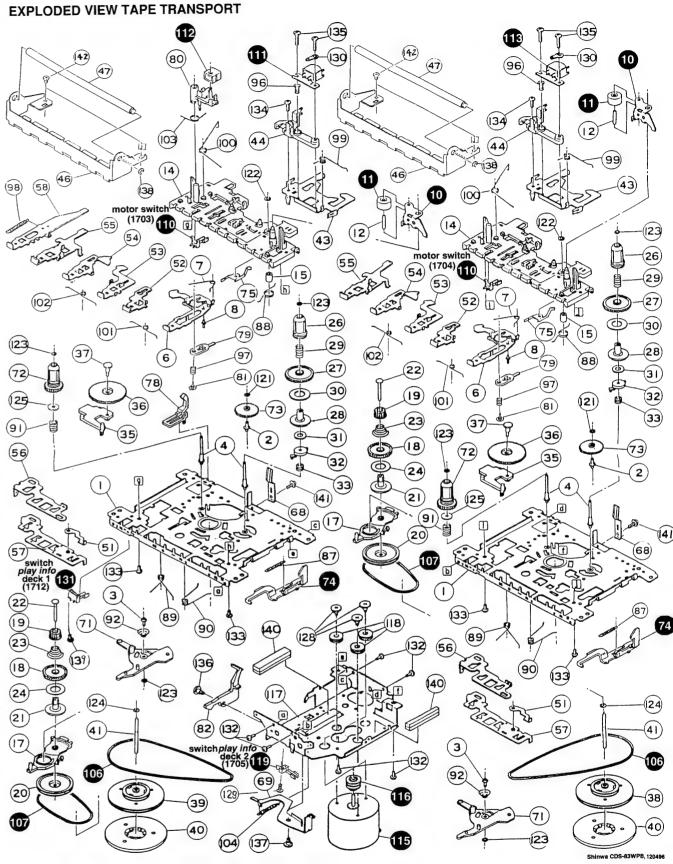


ALIGNMENT of AZIMUTH

- · Remove ornamental cover of cassette door.
- Use test cassette SBC420 (4822 397 30071).
- · Insert test cassette into cassette door.
- Play 10kHz part.
- · Adjust left hand screw for max. output and left channel = right channel.



picture 11



Only those parts of which a service code number is stated are normal service parts.

10 4822 528 70849 11 4822 528 70695

PINCH ROLLER ARM PINCH ROLLER ASSY **EJECT HOOK**

74 4822 403 30792 MAIN BELT 106 4822 358 31125 107 4822 358 31124

110 4822 278 90663 111 4822 249 10397

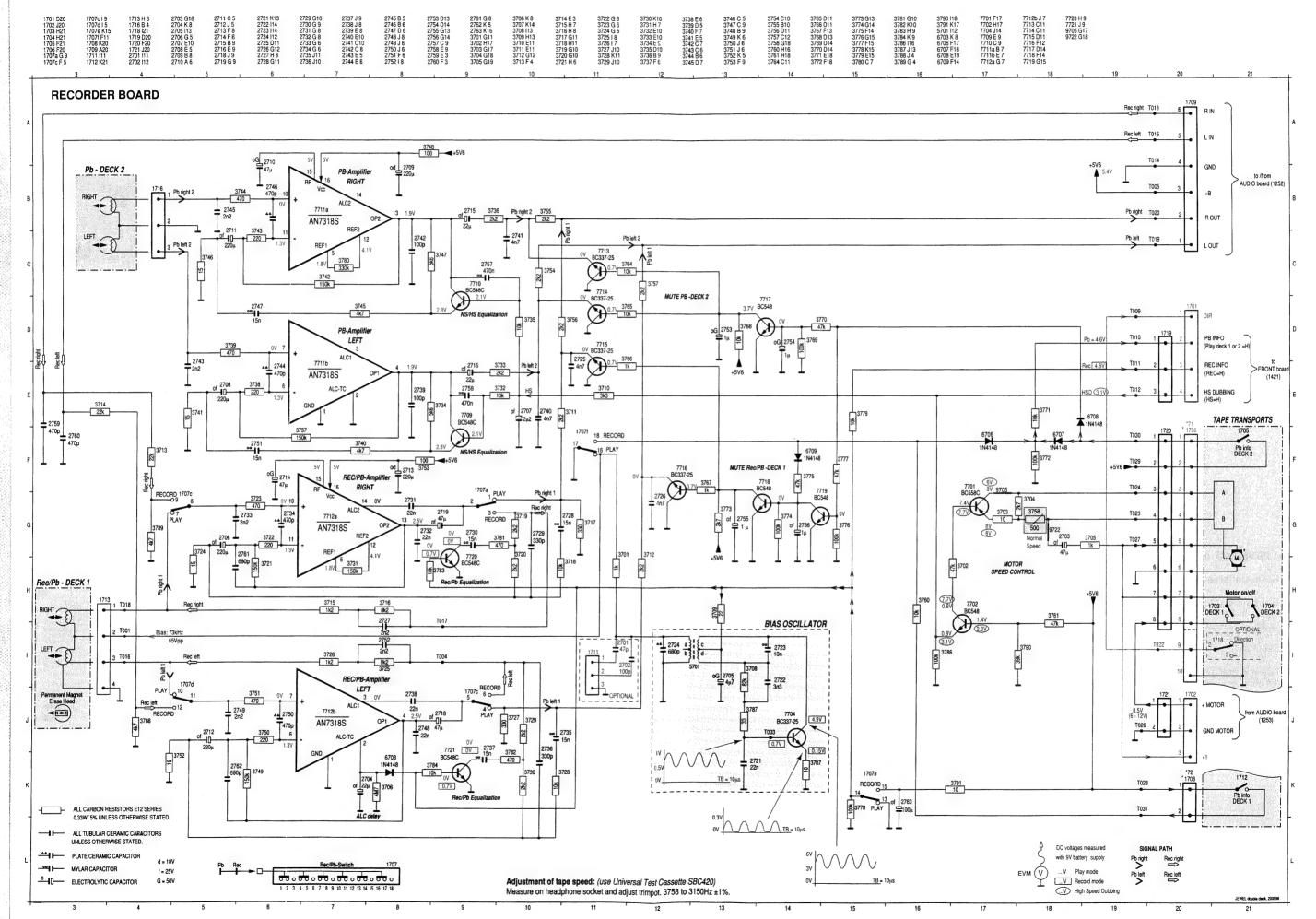
SUB BELT LEAF SWITCH, MOTOR ON/OFF REC/PB-HEAD, MS15R-AA2N1

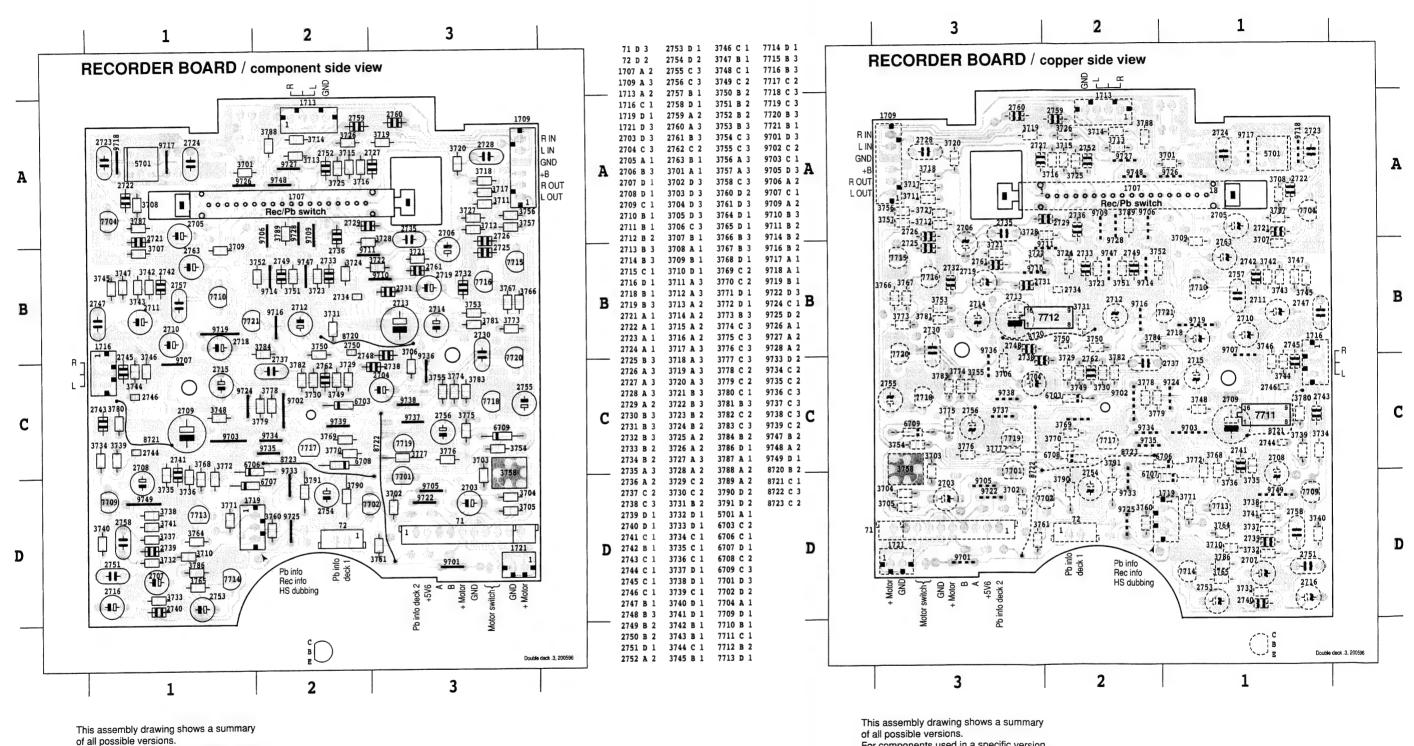
112 4822 249 40306 113 4822 249 10397

ERASE HEAD, TDK6PA REC/PB-HEAD, MS15R-AA2N1 MOTOR, EG-530YD-9BH

115 4822 361 21592 116 4822 528 81493 MOTOR PULLEY

LEAF SWITCH, INDICAT. PLAY DECK 2 119 4822 276 13494 LEAF SWITCH, INDICAT. PLAY DECK 1 131 4822 276 13712





This assembly drawing shows a summary of all possible versions.

For components used in a specific version see schematic diagram respectively partslist.

of all possible versions.

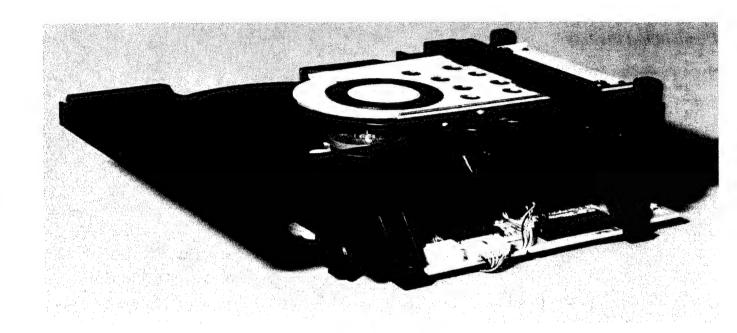
For components used in a specific version see schematic diagram respectively partslist.

ELECTRICAL PARTSLIST RECORDER BOARD

CS 48 953

MISCE	ELLANEOUS				RESIS	STORS				RESIS	STORS		
1707	4822 277 11504	SWITC	H SLIDE	E, REC/PB	3701	4822 116 83863	1kΩ	5%	0,5W	 3767	4822 116 83863	1kΩ	5%
					3702	4822 116 52284	47kΩ	5%	0,5W	3768	4822 116 83864	10kΩ	5%
CAPA	CITORS				3703	4822 116 52176	10Ω	5%	0,5W	3769	4822 116 52234	100kΩ	5%
				0517	3704	4822 116 52263	2,7kΩ	5%	0,5W	3770	4822 116 52284	47kΩ	5%
2703	4822 124 41397	47µF		25V	3705	4822 116 83863	1kΩ	5%	0,5W	3771	4822 116 83864	$10k\Omega$	5%
2704	4822 124 41596	22µF		50V									
2705	4822 124 40246	4,7µF		63V	3706	4822 111 30893	$4,7M\Omega$	5%	0,2W	3772	4822 116 52234	100 k Ω	5%
2706	4822 124 40181	220µF		10V	3707	4822 116 52176	10Ω	5%	0,5W	3773	4822 116 52263	$2,7k\Omega$	5%
2707	4822 124 41576	2,2µF	20%	50V	3708	4822 116 52304	82kΩ	5%	0,5W	3774	4822 116 52234	$100k\Omega$	5%
					3709	4822 116 52186	22Ω	5%	0,5W	3775	4822 116 52284	47kΩ	5%
2708	4822 124 40181	220µF	20%	10V	3710	4822 116 52263	$2,7k\Omega$	5%	0,5W	3776	4822 116 52234	$100k\Omega$	5%
2709	4822 124 80144	220µF		25V			_,	•	0,011	0,,0			•
2710	4822 124 41397	47µF		25V	3711	4822 116 52256	2,2kΩ	5%	0.16W	3777	4822 116 52284	47kΩ	5%
2711	4822 124 40181	220µF		10V	3712	4822 116 52256	2,2kΩ	5%	0,16W		4822 116 52234	100kΩ	5%
				10V						3778			
2712	4822 124 40181	220µF	20%	100	3713	4822 116 52257	22kΩ	5%	0,5W	3779	4822 116 83864	10kΩ	5%
				0.571	3714	4822 116 52257	22kΩ	5%	0,5W	3780	4822 116 52272	330kΩ	5%
2713	4822 124 80144	220µF		25V	3715	4822 116 52207	1,2k Ω	5%	0,5W	3781	4822 116 52224	470Ω	5%
2714	4822 124 41397	47µF		25V									
2715	4822 124 41596	22µF	20%	50V	3716	4822 116 52303	$8,2k\Omega$	5%	0,5W	3782	4822 116 52224	470Ω	5%
2716	4822 124 41596	22µF	20%	50V	3717	4822 116 52219	330Ω	5%	0,5W	3783	4822 116 83864	$10k\Omega$	5%
2718	4822 124 41397	47µF	20%	25V	3718	4822 116 83864	10kΩ	5%	0,5W	3784	4822 116 83864	$10k\Omega$	5%
					3719	4822 116 52256	$2,2k\Omega$	5%	0,16W	3786	4822 116 52234	100kΩ	5%
2719	4822 124 41397	47µF	20%	25V	3720	4822 116 52256	2,2kΩ	5%	0,16W	3787	4822 116 52191	33Ω	5%
	4822 121 43144	22nF		50V	0720	4022 110 32230	2,21132	J /6	0,10	3/6/	4022 110 32131	3032	J /6
2721					0701	4000 110 F004F	1501.0	F0/	0.40144	0700	4000 440 50000	4.71.0	F0/
2722	4822 122 10577	3,3nF		16V	3721	4822 116 52245	150kΩ	5%	0,16W	3788	4822 116 52283	4,7kΩ	5%
2723	4822 121 51304	10nF		50V	3722	4822 116 83872	220Ω	5%	0,5W	3789	4822 116 52283	$4,7$ k Ω	5%
2724	5322 122 32052	680pF	10%	50V	3723	4822 116 52224	470Ω	5%	0,5W	3790	4822 116 83882	$39k\Omega$	5%
					3724	4822 116 52182	15Ω	5%	0,5W	3791	4822 116 52176	10Ω	5%
2725	4822 126 11714	4,7nF	20%		3725	4822 116 52303	$8,2k\Omega$	5%	0,5W				
2726	4822 126 11714	4,7nF	20%							COILS	3		
2727	4822 122 10577	3,3nF	10%	16V	3726	4822 116 52207	$1,2k\Omega$	5%	0,5W				
2728	4822 121 51305	15nF		50V	3727	4822 116 52219	330Ω	5%	0,5W	5701	4822 157 10371	OSC. CO	OII VAR
2729	4822 126 12787	330pF		50V	3728	4822 116 83864	10kΩ	5%	0,5W	3701	4022 107 10071		OIL V/111.
2120	4022 120 12707	осорі	1070	001	3729	4822 116 52256	2,2kΩ	5%	0,16W	DIODI	Ee		
2730	4822 121 51305	15nF	10%	50V	3730		-			וטטוט	E3		
					3/30	4822 116 52256	$2,2k\Omega$	5%	0,16W	9700	1000 100 00001	4114440	
2731	4822 126 11585	22nF		50V						6703	4822 130 30621	1N4148	
2732	4822 126 11585	22nF		50V	3731	4822 116 52245	150k Ω	5%	0,16W	6706	4822 130 30621	1N4148	
2733	4822 126 12339	2,2nF		16V	3732	4822 116 83864	$10k\Omega$	5%	0,5W	6707	4822 130 30621	1N4148	
2734	5322 122 32311	470pF	10%	100V	3733	4822 116 52256	$2,2k\Omega$	5%	0,16W	6708	4822 130 30621	1N4148	
					3734	4822 116 52289	$5,6k\Omega$	5%	0,16W	6709	4822 130 30621	1N4148	
2735	4822 121 51305	15nF	10%	50V	3735	4822 116 83864	$10k\Omega$	5%	0,5W				
2736	4822 126 12787	330pF	10%	50V						TRAN	SISTORS		
2737	4822 121 51305	15nF	10%	50V	3736	4822 116 52256	$2,2k\Omega$	5%	0,16W				
2738	4822 126 11585	22nF		50V	3737	4822 116 52245	150kΩ	5%	0,16W	7701	5322 130 60068	BC558C	
2739	4822 122 33195	100pF		50V	3738	4822 116 83872		5%					
2103	7022 122 00100	тоорі	1070	30 V	3739	4822 116 52224	220Ω	5%	0,5W	7702	4822 130 40938	BC548)E
0740	4000 400 44744	4 7-5	000/				470Ω		0,5W	7704	4822 130 40981	BC337-2	
2740	4822 126 11714	4,7nF			3740	4822 116 52283	$4,7$ k Ω	5%	0,5W	7709	4822 130 44196	BC548C	
2741	4822 126 11714	4,7nF								7710	4822 130 44196	BC548C	
2742	4822 122 33195	100pF		50V	3741	4822 116 52182	15Ω	5%	0,5W				
2743	4822 126 12339	2,2nF	10%	16V	3742	4822 116 52245	150k Ω	5%	0,16W	7713	4822 130 40981	BC337-2	25
2744	5322 122 32311	470pF	10%	100V	3743	4822 116 83872	220Ω	5%	0,5W	7714	4822 130 40981	BC337-2	25
					3744	4822 116 52224	470Ω	5%	0,5W	7715	4822 130 40981	BC337-2	25
2745	4822 126 12339	2,2nF	10%	16V	3745	4822 116 52283	$4,7k\Omega$	5%	0,5W	7716	4822 130 40981	BC337-2	
2746	5322 122 32311	470pF	10%	100V			.,		0,011	7717	4822 130 40938	BC548	
2747	4822 121 51305	15nF	10%	50V	3746	4822 116 52182	15Ω	5%	0,5W	,,,,	4022 100 40000	50040	
		22nF	20%	50V	3747	4822 116 52289		5%	0,16W	7710	4000 400 40000	DOE 40	
2748	4822 126 11585						5,6kΩ			7718	4822 130 40938	BC548	
2749	4822 126 12339	2,2nF	10%	16V	3748	4822 116 52175	100Ω	5%	0,5W	7719	4822 130 40938	BC548	
			100/	1001/	3749	4822 116 52245	150kΩ	5%	0,16W	7720	4822 130 44196	BC548C	
2750	5322 122 32311	470pF	10%	100V	3750	4822 116 83872	220Ω	5%	0,5W	7721	4822 130 44196	BC548C	
2751	4822 121 51305	15nF	10%	50V									
2752	4822 122 10577	3,3nF	10%	16V	3751	4822 116 52224	470Ω	5%	0,5W	INTEG	RATED CIRCUITS		
2753	4822 124 40242	1µF	20%	63V	3752	4822 116 52182	15Ω	5%	0,5W				
2754	4822 124 40242	1µF	20%	63V	3753	4822 116 52175	100Ω	5%	0,5W	7711@	4822 209 32918	AN73185	S, Rec/Ph
		F.	-		3754	4822 116 52256	2,2kΩ	5%	0,16W		4822 209 32918	AN73185	
2755	4822 124 40242	1µF	20%	63V	3755	4822 116 52256	2,2kΩ	5%	0,16W				.,
2756	4822 124 40242	1μF	20%	63V	0.00	02200	-,-/\26	J /6	3,1011				
		•			2750	4900 116 E00E0	0.01-0	Eo/	0.16/4/				
2757	4822 121 51252	470nF	5%	63V	3756	4822 116 52256	2,2kΩ	5%	0,16W				
2758	4822 121 51252	470nF	5%	63V	3757	4822 116 52256	2,2kΩ	5%	0,16W				
2759	4822 122 33519	470pF	10%	50V	3758	4822 100 20165	500Ω T						
					3760	4822 116 83864	$10k\Omega$	5%	0,5W				
760	4822 122 33519	470pF	10%	50V	3764	4822 116 83864	$10k\Omega$	5%	0,5W				
761	4822 122 33169	680pF	10%	50V									
762	4822 122 33169	680pF	10%	50V	3765	4822 116 83864	10kΩ	5%	0,5W				
2763	4822 124 41584	100µF		10V	3766	4822 116 83863	1kΩ	5%	0,5W				
_,	157 71007	. JUP:			0,00		11/46	· • /0	0,011				

0,5W R. 100kHz /Pb-AMPLIFIER IC /Pb-AMPLIFIER IC



ECO SHORT LOADER UNIT

for Portables

TABLE OF CONTENTS

Dismantling hints Disassembly drawings Functional Diagram Abbreviations	 0-2 0-5
CD Board Component Layout	
Faultfinding Tree CD Exploded view	 0-9

Dismantling hints CD Short Loader

Dismantling the tray

- a) Press open/close button to open the tray. If the tray doesn't work, use a small screwdriver as shown in Fig.1 point 1 to move the tray outside. After the first centimetre it is possible to pull the tray out by hand.
- b) Release two snaps and remove tray.

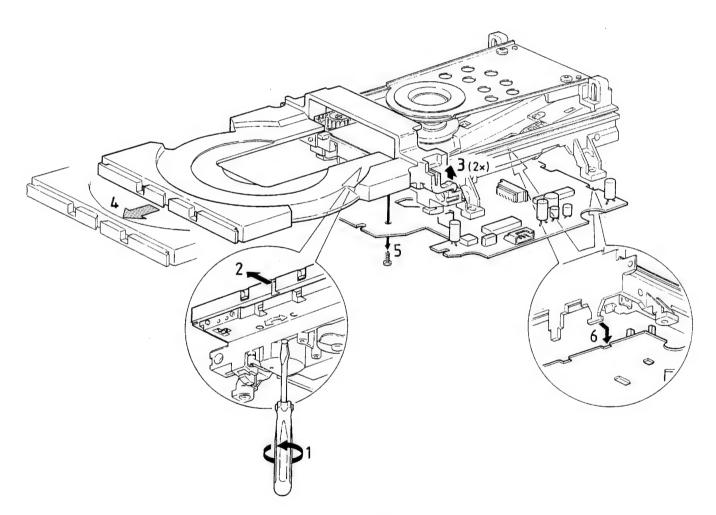
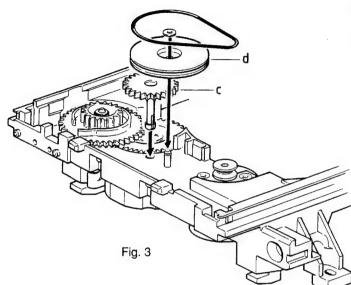
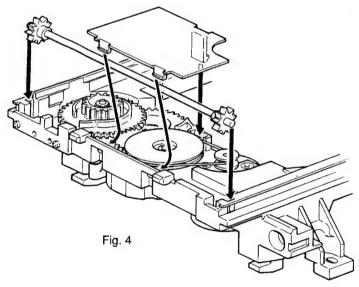


Fig. 1

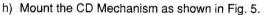
Assembly of gear a) Use a pin (e.g. a paperclip) to align the cam wheel (a) withthe gear wheel (b). See Fig. 2. b) Fix the wheels with the small plastic whashers. Fig. 2



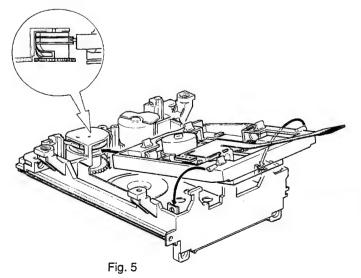
- Mount idle wheel 2 (c) and idle wheel 1 (d) in any position. See Fig. 3.
- d) Fix the idle wheel 1 (d) with the small plastic whasher.
- e) Mount the driving belt.



- Mount the pinion guiding assy and the cover as shown in Fig. 4.
- g) Turn the gear wheel (b) counter clockwise to endposition.



 Mount the tray (Align the tray to the chassis and push it inside).



Check if tray mechanism works correctly!

1) Turn the gear wheel (b) clockwise to its endposition (Use a small screwdriver as shown in Fig. 1 point 1).

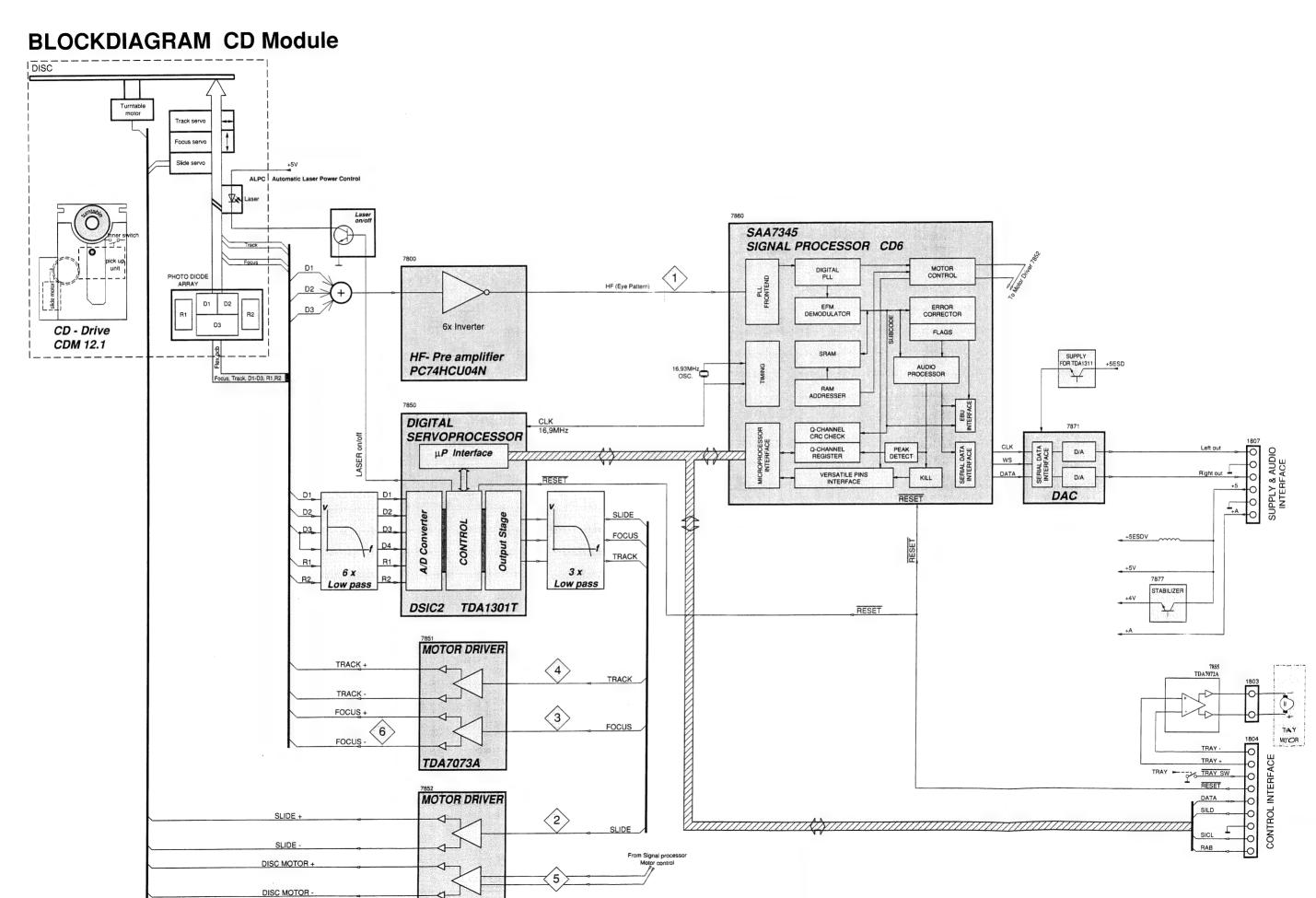
The tray has to move to inner position first and then the CD mechanism has to move to its upper position.

Turn the gear wheel (b) counter clockwise to its endposition.

The CD Mechanism has to move to its lower position first and then the tray has to move outside.

TDA7073A

.)

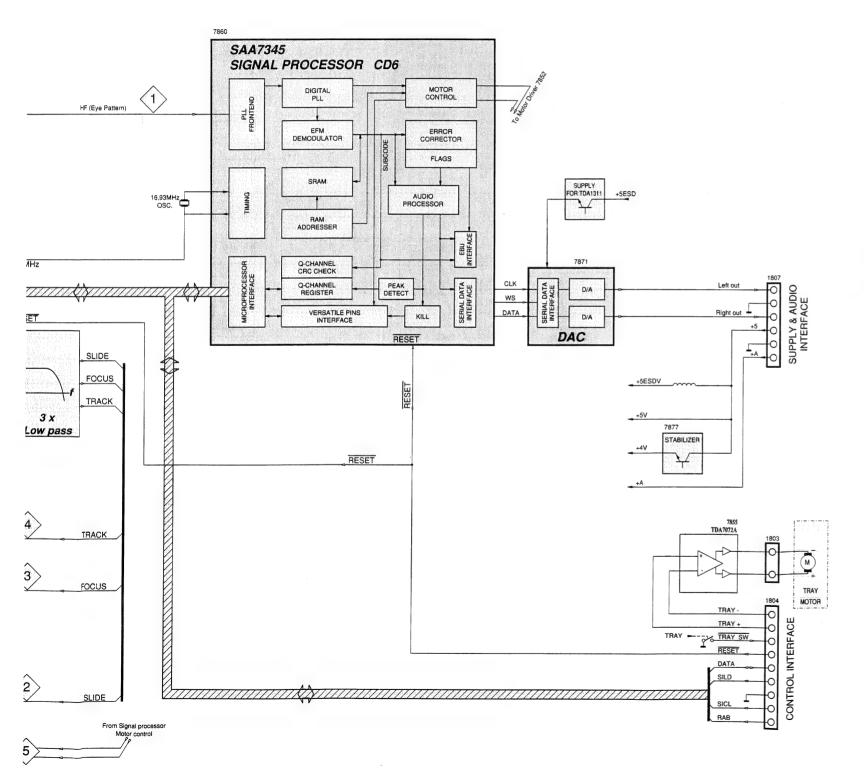


Abb

DSIC2

Pin 10

SIGN



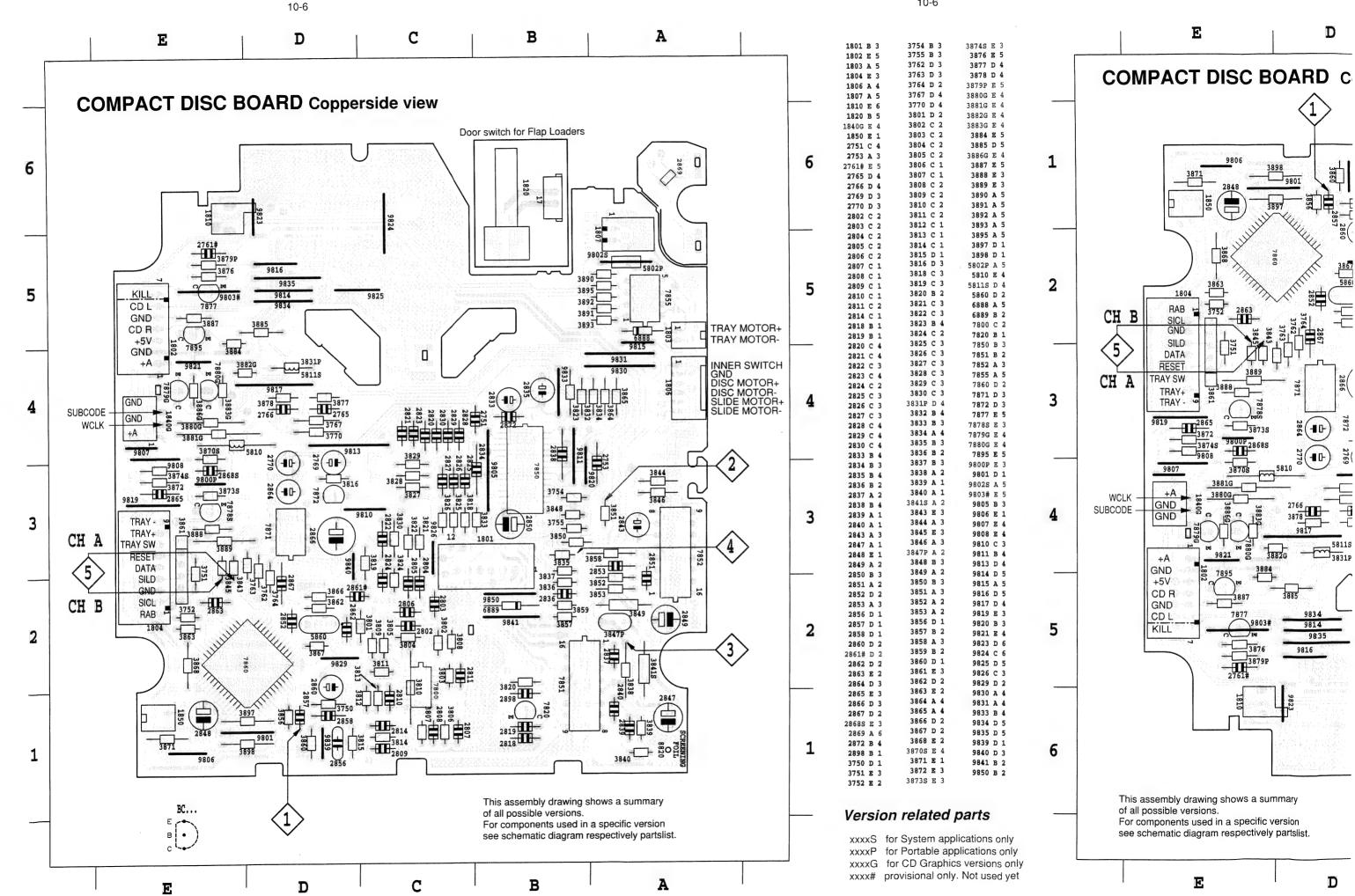
Abbreviations CD Part

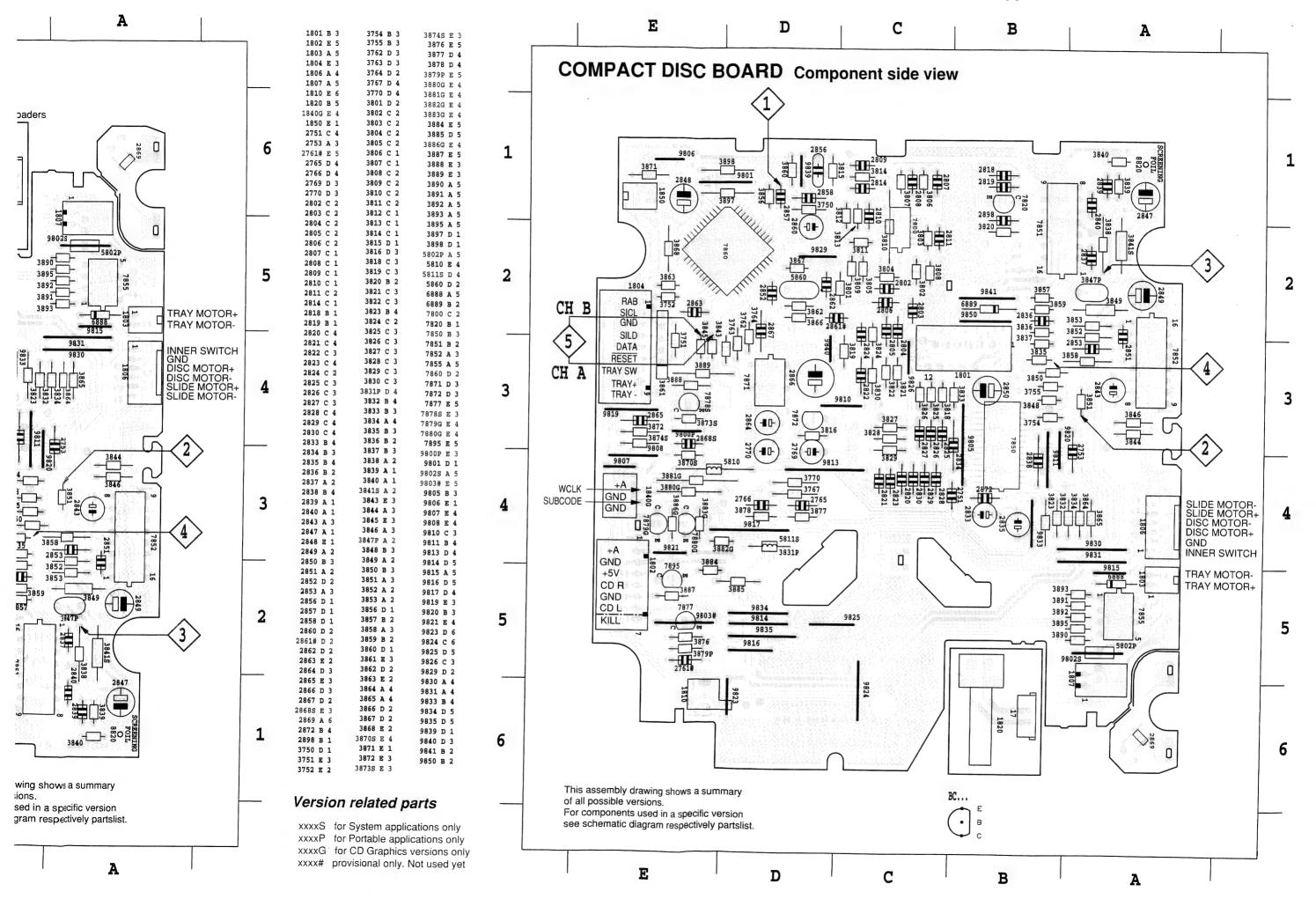
DSIC2

Pin	Name	Direction	Description
1 2 3 4 5 6 7 8 9 10 11 12	RESET Laser on/off Gnd VRH D1 D2 D3 Vref D4 R1 R2 VDD	µP → DSIC2 DSIC2 → Laser switch Gnd not connected Diode array → DSIC2 Diode array → DSIC2 Diode array → DSIC2 Gnd Diode array → DSIC2 Gnd Diode array → DSIC2 Diode array → DSIC2 Diode array → DSIC2 Diode array → DSIC2	Reset input (Low level is active) Switches Laser on/off (High level is active) Ground (Analogue part) Reference input for A/D Converter Unipolar current input (Central diode signal input) Unipolar current input (Central diode signal input) Unipolar current input (Central diode signal input) Reference input for A/D Converter Unipolar current input (Central diode signal input) Unipolar current input (Satellite diode signal input) Unipolar current input (Satellite diode signal input) Supply for DSIC2 (Analogue part)
13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	TS1 TS2 OTD CLO XTLO XTLI VDD Gnd Track Focus Slide SILD SICL SIDA VDD	Gnd Gnd not connected DSIC2 → Servo Driver DSIC2 → Servo Driver DSIC2 → Servo Driver DSIC2 → Servo Driver µP → DSIC2 µP → DSIC2 µP ↔ DSIC2	Test input 1 Test input 2 Off Track Detection (Low level is active) Clock output Oscillator output pin Oscillator input pin +Supply for DSIC2 (Digital part) Ground (Digital part) Radial actuator output Focus actuator output Slide motor output Serial Interface Load Serial Interface Data +Supply for DSIC2 (Digital part)

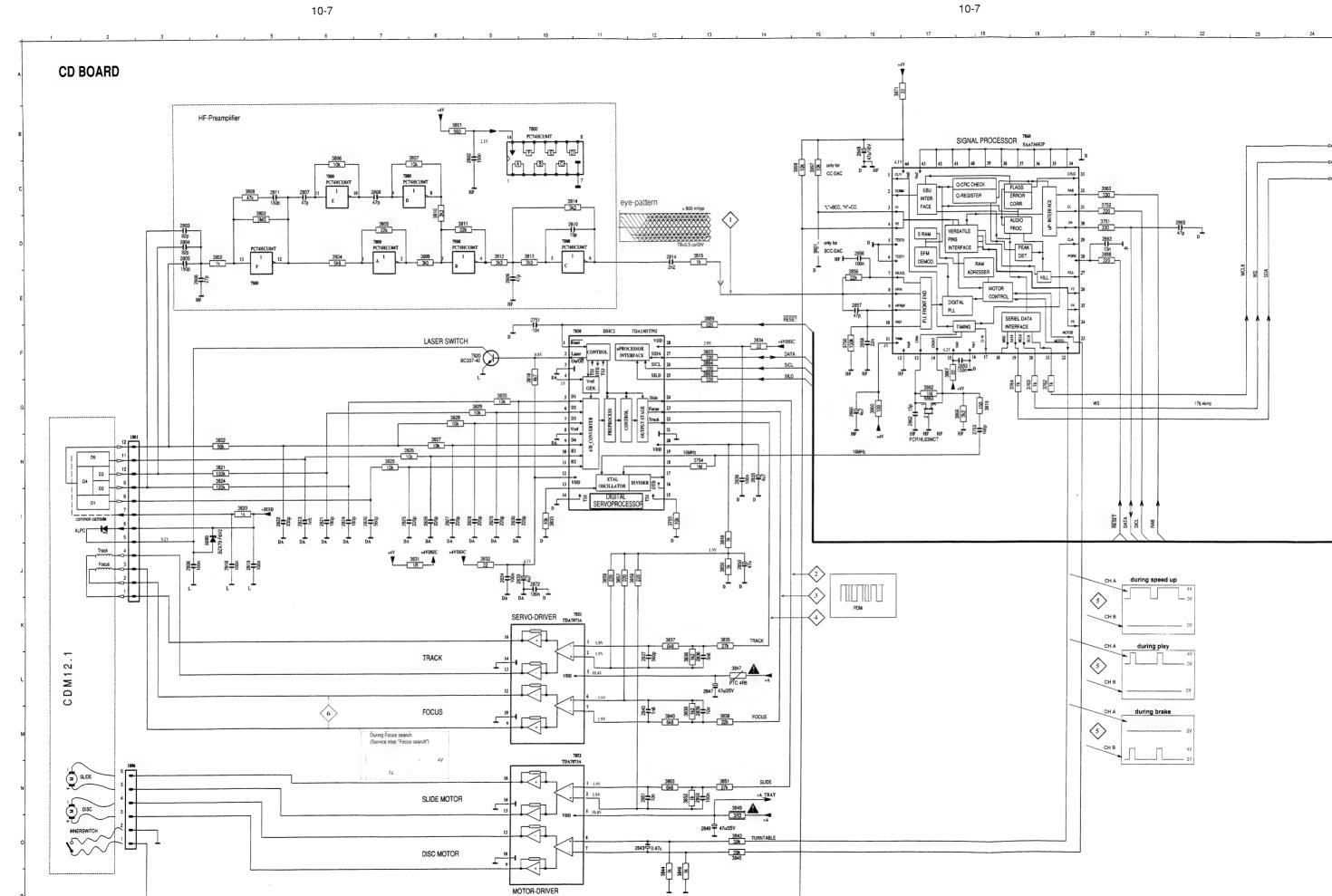
SIGN	IAL PROCESSO	OR CD6	
Pin	Name	Direction	Description
Pin 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Name CL11 DOBM V1 V2 Test2 Test1 ISLICE HFIN HFREF IREF VDDA VSSA CRIN CROUT VDD1 VSS1 CL16 MISC DATA WCLK SCLK MOTOR1 MOTOR2	Direction not connected not connected → Signal processor → Signal processor Gnd Gnd Signal processor → Signal processor HF Pre-amp → Signal processor HF Pre-amp → Signal processor → Signal processor X-Tal → Signal processor X-Tal → Signal processor Signal processor → X-Tal not connected not connected Signal processor → DAC Signal processor → DAC Signal processor → DAC Signal processor → DAC Signal processor → Disc motor driver Signal processor → Disc motor driver	11,2896MHz clock output (3-state) digital bi-phase mark output (3-state) Versatile input (used for Version detection) Versatile input (used for inner switch detection) Test input of Signal processor Test input of Signal processor Current feedback from internal data slicer Comparator signal input Comparator signal input reference current pin (nom. VDD/2) +Supply (analogue) of signal processor - Supply (analogue) of signal processor Crystal/resonator input of signal processor Crystal/resonator output of signal processor +Supply for I/O buffers of signal processor - Supply for I/O buffers of signal pro
24 25	V5 V4	not connected not connected	Motor output2 of signal processor; versatile (3-state) Versatile output pin of signal processor Versatile output pin of signal processor
26 27 28 29 30	V3 KILL PORE CLA DA	not connected not connected $\mu P \rightarrow Signal\ processor$ not connected	Versatile output pin of signal processor Kill output, programable (open drain) Power On Reset enable input (active low) 4,2336MHz microprocessor clock output
31 32 33	CL RAB CFLG not used	μP ↔ Signal processor μP → Signal processor μP → Signal processor Signal processor →	Interface data I/O line Interface clock input line Interface R/W and acknowledge input Correction flag output (open drain)
43 44	VSS2 VDD2		Digital supply for internal logic of signal processor Digital supply for internal logic of signal processor

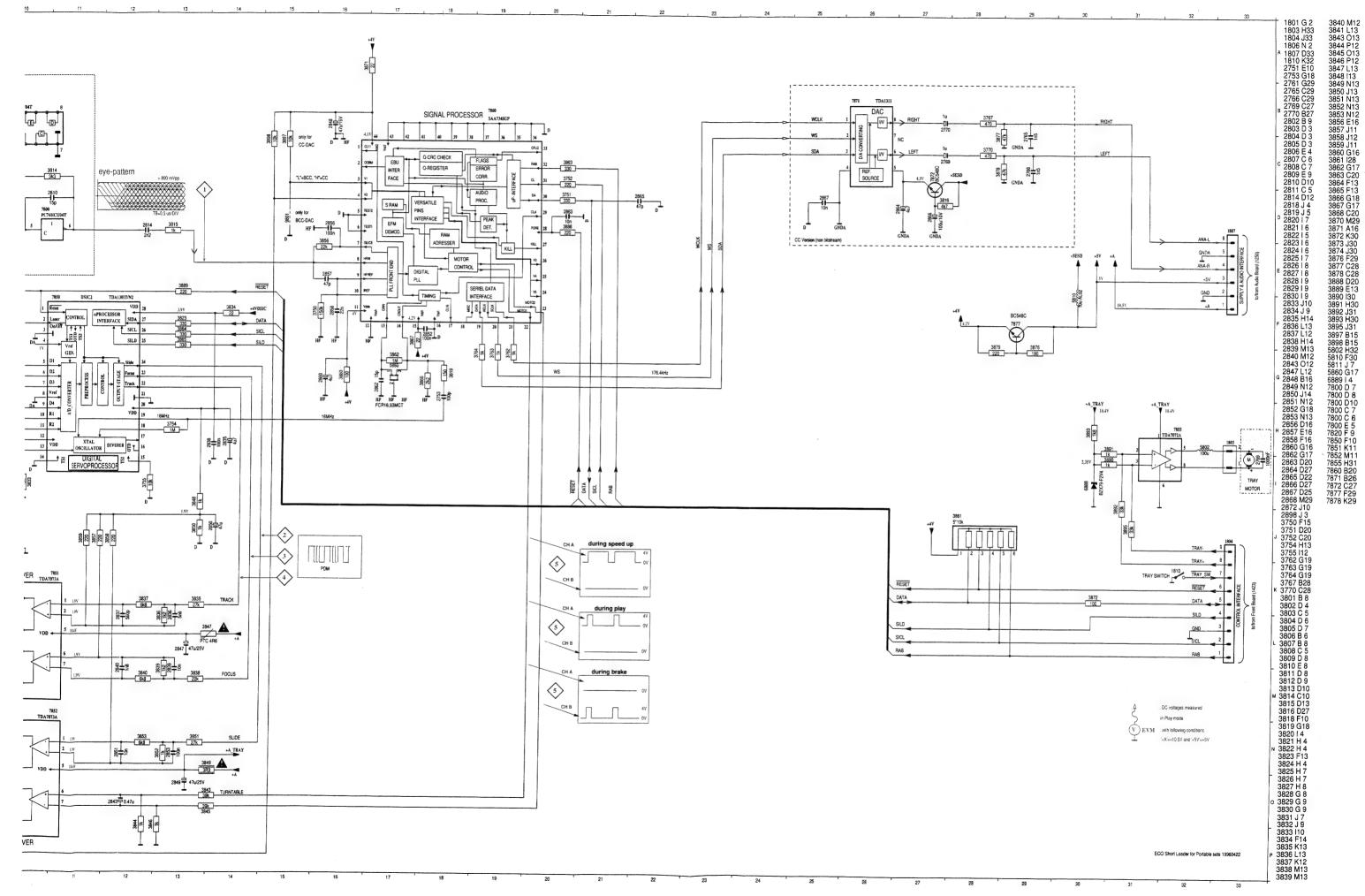






...*





WARNING

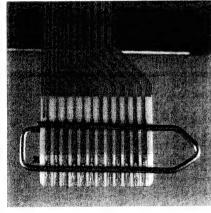
CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE CDM-ELECTRONICS WHEN CONNECTING A NEW CDM MECHANISM. THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE

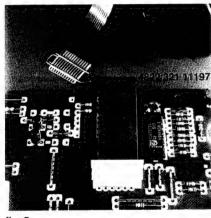
- · SWITCH OFF POWER SUPPLY
- ESD PROTECTION

ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

The following steps have to be done when replacing the CDM mechanism:

- 1. Disconnect old CDM flexfoil from printed board
- 2. Connect paperclip to CDM flexfoil to short-circuit flexfoil (fig.1)
- 3. Short-circuit printed board with brass-sheet (4822 321 11197) plugged into the flexfoil connector (fig.2)
- 4. Remove old CDM mechanism
- 5. Position new CDM mechanism in its studs
- 6. Remove short-circuit from printed board connector
- 7. Remove short-circuit from flexfoil of new CDM
- 8. Connect new flexfoil to print connector (fig.3)





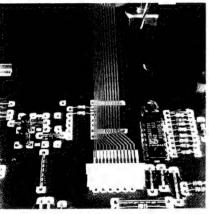
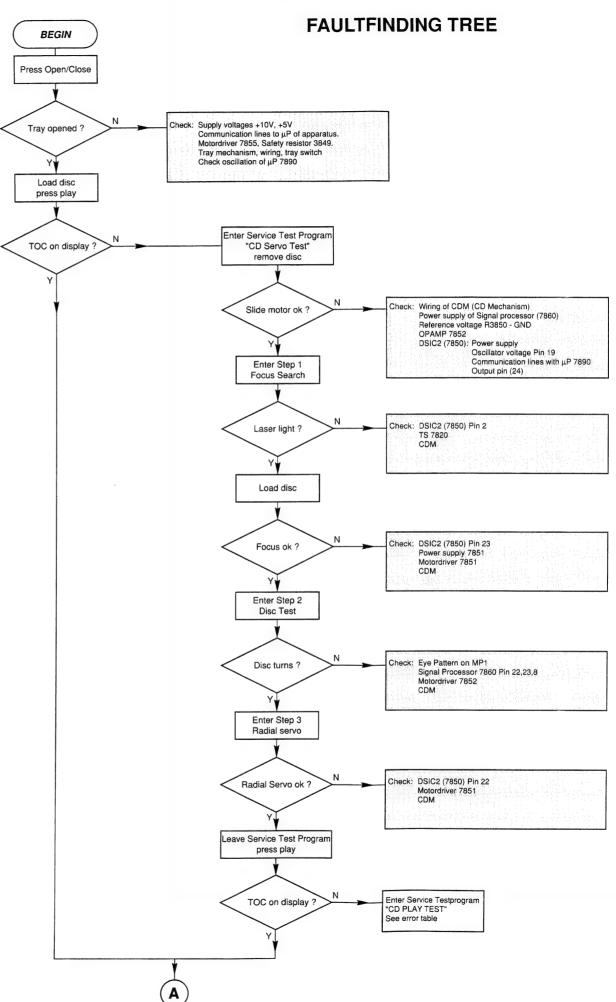


fig.1

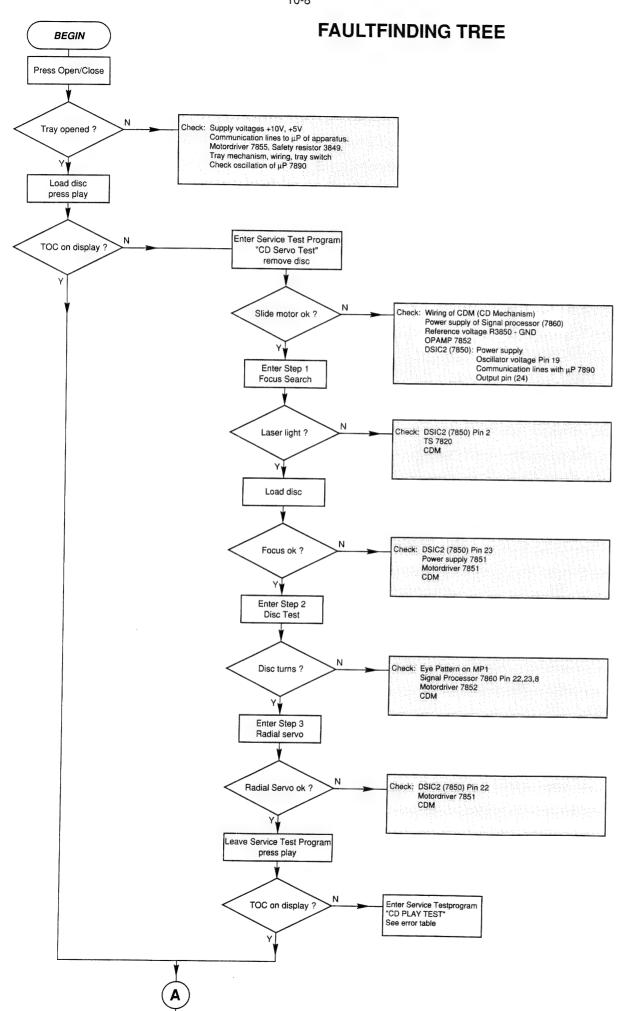
fig.2

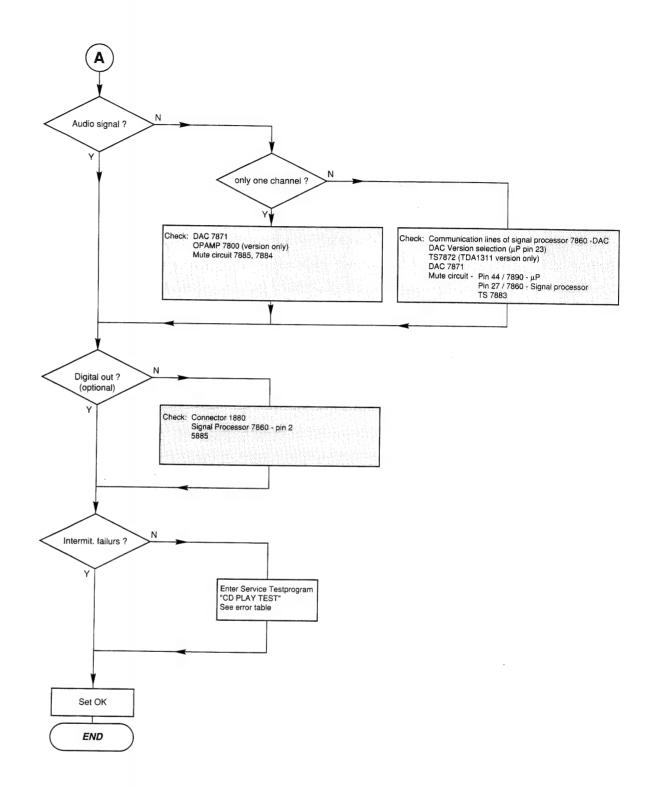
fig.3

Remarks



Digita

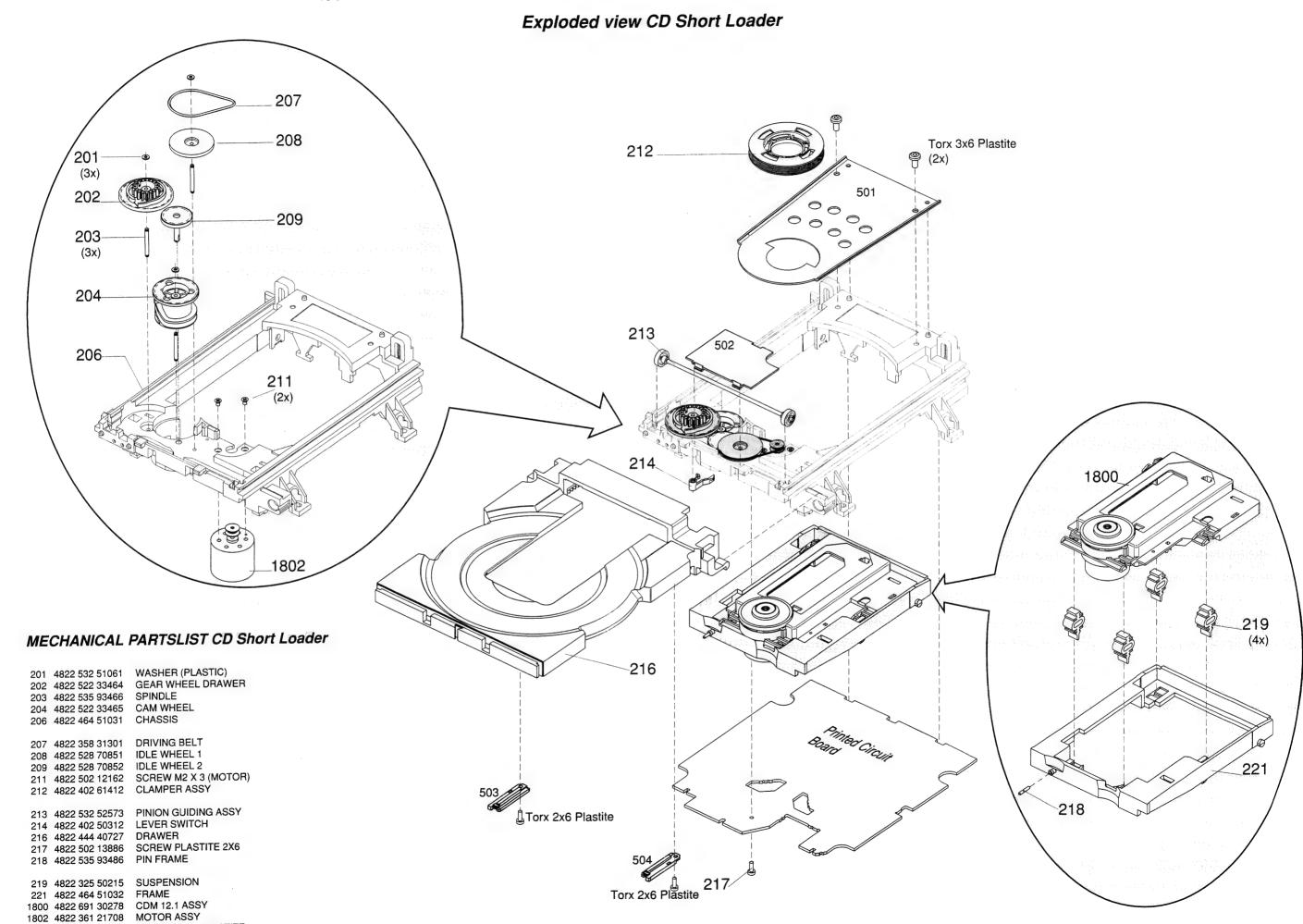




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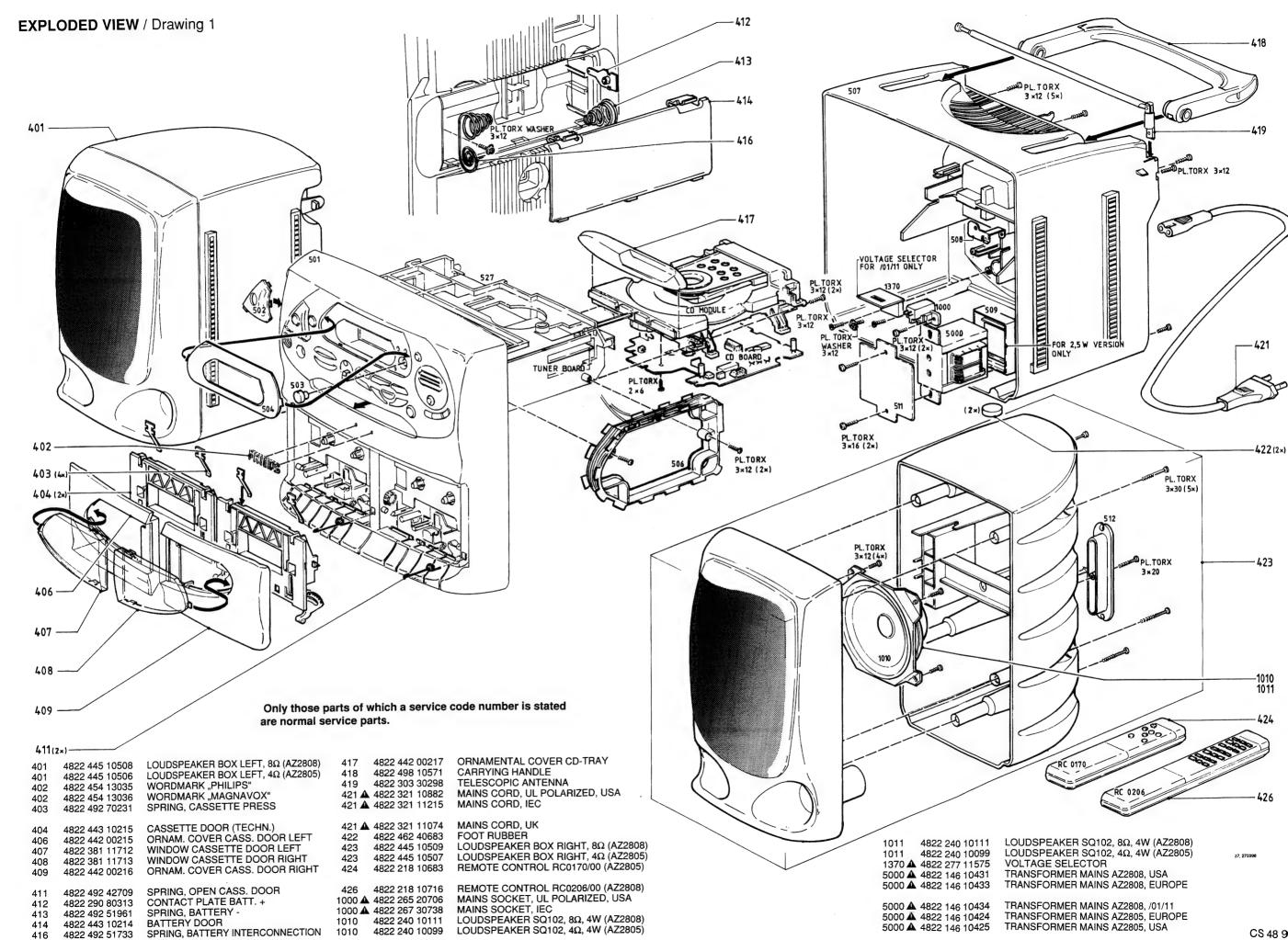
4822 502 30735 SCREW 3 X 6 PLASTITE



MISCEL	LANEOUS				CAPA	CITORS				
1810	4822 276 13503	SWITCH	H, TRAY		2867	4822 121 51387	10nF	20%	16V	
CAPAC	ITORS				2869@ 2872 	9 4822 126 11692 4822 126 12882 4822 126 12882	1µF 100nF 100nF	20% 20% 20%	16V 50V 50V	
2751	4822 121 51387	10nF	20%	16V	2030	4022 120 12002	100111	2070	30 1	
2753	4822 122 33195	100pF	10%	50V	RESIS	STORS				
2765	4822 126 12878	1,5nF	10%	16V						
2766	4822 126 12878	1,5nF	10%	16V	3750	4822 116 52245	150k Ω	5%	0,16W	
2769	4822 124 41969	1µF	20%	50V	3751	4822 116 52219	330Ω	5%	0,5W	
2700	40LL 12 7 71000		2070	•••	3752	4822 116 52215	220Ω	5%	0,16W	
2770	4822 124 41969	1µF	20%	50V	3754	4822 116 52235	1ΜΩ	5%	0,5W	
2802	4822 126 12882	100nF	20%	50V	3755	4822 116 83864	10kΩ	5%	0,5W	
2803	4822 122 10319	82pF	5%	50V	0.00			•	0,0	
2804	4822 122 10319	82pF	5%	50V	3762	4822 050 11002	1kΩ	5%	0,2W	
2805	4822 122 33849	150pF	10%	50V	3763	4822 050 11002	1kΩ	5%	0,2W	
2003	4022 122 33043	ТЭОРІ	10 /6	30 V	3764	4822 050 11002	1kΩ	5%	0,2W	
2806	4822 122 33192	27pF	5%	50V	3767	4822 116 52224	470Ω	5%	0,5W	
2807	4822 122 33848	47pF	5%	50V	3770	4822 116 52224	470Ω	5%	0,5W	
2808	4822 122 33848	47pF	5%	50V	3770	4022 110 32224	47032	0 /0	0,011	
2809	4822 122 33848	47pF	5%	50V	3801	4822 116 52226	560Ω	5%	0,5W	
	4822 122 10462	15pF	5%	50V	3802	4822 050 11002	1kΩ	5%	0,2W	
2810	4022 122 10402	Topi	3 /6	30 V	3803	4822 111 50499	3,3ΜΩ	5%	0,2W	
0011	4000 400 00040	150pF	100/	50V	3804	4822 116 52296	6,8kΩ	5%	0,5W	
2811	4822 122 33849		10%		3805		22kΩ	5%	0,5W	
2814	4822 126 12339	2,2nF	10%	16V	3605	4822 116 52257	22N32	5%	0,5	
2818	4822 126 12882	100nF	20%	50V	2806	4000 116 00064	1010	E0/	0,5W	
2819	4822 126 12882	100nF	20%	50V 50V	3806 3807	4822 116 83864 4822 116 83864	10kΩ 10kΩ	5% 5%	0,5W	
2820	4822 122 10459	560pF	10%	50 V						
	1000 100 10050	400	400/	50)/	3808	4822 116 52284	47kΩ	5%	0,5W	
2821	4822 126 10053	180pF	10%	50V	3809	4822 116 52269	3,3kΩ	5%	0,5W	
2822	4822 126 12787	330pF	10%	50V	3810	4822 116 52269	$3,3k\Omega$	5%	0,5W	
2823	4822 126 12878	1,5nF	10%	16V	0044	1000 110 50057	001.0	F0/	0.5147	
2824	4822 126 10053	180pF	10%	50V	3811	4822 116 52257	22kΩ	5%	0,5W	
2825	4822 122 10466	220pF	10%		3812	4822 116 52269	3,3kΩ	5%	0,5W	
					3813	4822 116 52269	3,3kΩ	5%	0,5W	
2826	4822 122 10466	220pF	10%		3814	4822 116 52269	3,3kΩ	5%	0,5W	
2827	4822 122 10466	220pF	10%		3815	4822 050 11002	1kΩ	5%	0,2W	
2828	4822 122 10466	220pF	10%							
2829	4822 122 10466	220pF	10%		3816	4822 116 52283	4,7kΩ	5%	0,5W	
2830	4822 122 10466	220pF	10%		3818	4822 116 52283	$4,7k\Omega$	5%	0,5W	
					3819	4822 116 52211	150Ω	5%	0,5W	
2833	4822 124 23401	4,7µF	20%	25V	3820	4822 050 11002	1kΩ	5%	0,2W	
2834	4822 126 12882	100nF	20%	50V	3821	4822 116 52239	120kΩ	5%	0,5W	
2835	4822 124 23401	4,7µF	20%	25V						
2836	4822 126 13098	5,6nF		16V	3822	4822 116 52291	56kΩ	5%	0,5W	
2837	4822 122 10459	560pF	10%	50V	3823	4822 116 52219	330Ω	5%	0,5W	
					3824	4822 116 52239	120kΩ	5%	0,5W	
2838	4822 126 12882	100nF	20%	50V	3825	4822 116 83864	$10k\Omega$	5%	0,5W	
2839	4822 121 51387	10nF	20%	16V	3826	4822 116 83864	10kΩ	5%	0,5W	
2840	4822 122 10576	1,8nF	10%	16V						
2843	5322 124 41948	0,47uF	20%	50V	3827	4822 116 83864	10kΩ	5%	0,5W	
2847	4822 124 40433	47µF	20%	25V	3828	4822 116 83864	10kΩ	5%	0,5W	
					3829	4822 116 83864	10kΩ	5%	0,5W	
2848	4822 124 23178	47µF	20%	16V	3830	4822 116 83864	10kΩ	5%	0,5W	
2849	4822 124 40433	47µF	20%	25V	3831	4822 116 80176	1Ω	5%	0,5W	
2850	4822 124 23178	47µF	20%	16V						
2851	4822 121 51387	10nF	20%	16V	3832	4822 116 52186	22Ω	5%	0,5W	
2852	4822 126 12882	100nF	20%	50V	3833	4822 116 83864	$10k\Omega$	5%	0,5W	
					3834	4822 116 52186	22Ω	5%	0,5W	
2853	4822 126 12882	100nF	20%	50V	3835	4822 116 52264	$27k\Omega$	5%	0,5W	
2856	5322 121 42578	100nF	10%	100V	3836	4822 116 52207	1,2k Ω	5%	0,5W	
2857	4822 122 33848	47pF	5%	50V						
2858	4822 126 11585	22nF	20%	50V	3837	4822 116 52296	$6,8$ k Ω	5%	0,5W	
2860	4822 124 23401	4,7µF	20%	25V	3838	4822 116 52257	$22k\Omega$	5%	0,5W	
					3839	4822 116 52207	1,2k Ω	5%	0,5W	
2862	4822 122 10462	15pF	5%	50V	3840	4822 116 52296	$6,8k\Omega$	5%	0,5W	
2863	4822 121 51387	10nF	20%	16V	3843	4822 116 83882	$39k\Omega$	5%	0,5W	
2864	4822 124 23401	4,7µF	20%	25V						
2865	4822 122 33848	47pF	5%	50V	3844	4822 050 11002	1kΩ	5%	0,2W	
2866	4822 124 42446	100µF	20%	10V	3845	4822 116 83882	$39k\Omega$	5%	0,5W	
					3846	4822 050 11002	1kΩ	5%	0,2W	
					3847	4822 117 12069	$4,6\Omega$	25%	PTC	
					3848	4822 050 11002	1kΩ	5%	0,2W	

3849	4822 052 10338	$3,3\Omega$		NFR25	
3850	4822 050 11002	1kΩ	5%	0,2W	
	4822 116 52264	27kΩ	5%	•	
	4822 050 11002	1kΩ		0,2W	
3853	4822 116 52296	$6,8k\Omega$	5%	0,5W	
3856	4822 116 52257	22kΩ		,	
3857	4822 116 52215	220Ω		•	
3858	4822 116 52215	220Ω			
	4822 116 52215 4822 116 52175				
				,	
	4822 116 90836		5%	5x10kΩ 0,5W	
3862	4822 116 52235 4822 116 52219	1MΩ 330Ω		•	
3863 3864	4822 116 52219			•	
3865	4822 116 52219				
3866	4822 116 52256	2,2kΩ	5%	0,16W	
	4822 116 52186	22Ω	5%	0,5W	
	4822 116 52186	22Ω	5%	0,5W	
3872	4822 116 52175	100Ω	5%	•	
3876	4822 116 52213	180Ω	5%	0,5W	
3877	4822 116 52284	47kΩ	5%	0,5W	
3878	4822 116 52284	47kΩ	5%		
3879	4822 116 52215				
	4822 116 52215				
3889	4822 116 52215	220Ω	5%		
3890	4822 050 11002	1kΩ		,	
3891	4822 050 11002	1kΩ		,	
3892	4822 116 52271	$33k\Omega$	5%		
3893	4822 116 52249	-			
3895	4822 116 52271	33kΩ	5%	0,16W	
	4822 116 83864				
3898	4822 116 83864	10kΩ	5%	0,5W	
COILS					
	4822 157 50964				
5810	4822 152 20677		0 10	20141.1-	
5860	4822 242 81865	CER.RE	5. 16,	93IVIHZ	
DIODE	S 				
6888	4822 130 80655	BZX79-F			
6889	4822 130 34167	BZX79-F	6V2		
TRANS	ISTORS				
7820	4822 130 41344	BC337-4			
	4822 130 44196	BC548C			
7877 7878	4822 130 44196 4822 130 44196	BC548C BC548C			
/6/0	4022 130 44190	BC346C			
	RATED CIRCUITS				
INTEGI	5322 209 11517			(6-fold Invert	er)
7800©			II/INI,		IIVED
7800© 7850©	4822 209 31064	TDA1301	2 A /NIO	MATTER	
7800© 7850© 7851	4822 209 31064 4822 209 32852	TDA7073		MOTOR DE	
7800© 7850© 7851 7852	4822 209 31064	TDA7073	3A/N2,	MOTOR DE MOTOR DE DTOR DRIVE	RIVER
7800© 7850© 7851 7852 7855	4822 209 31064 4822 209 32852 4822 209 32852	TDA7073 TDA7073 TDA7072	3A/N2, 2A, MC	MOTOR DF	RIVER





11-1

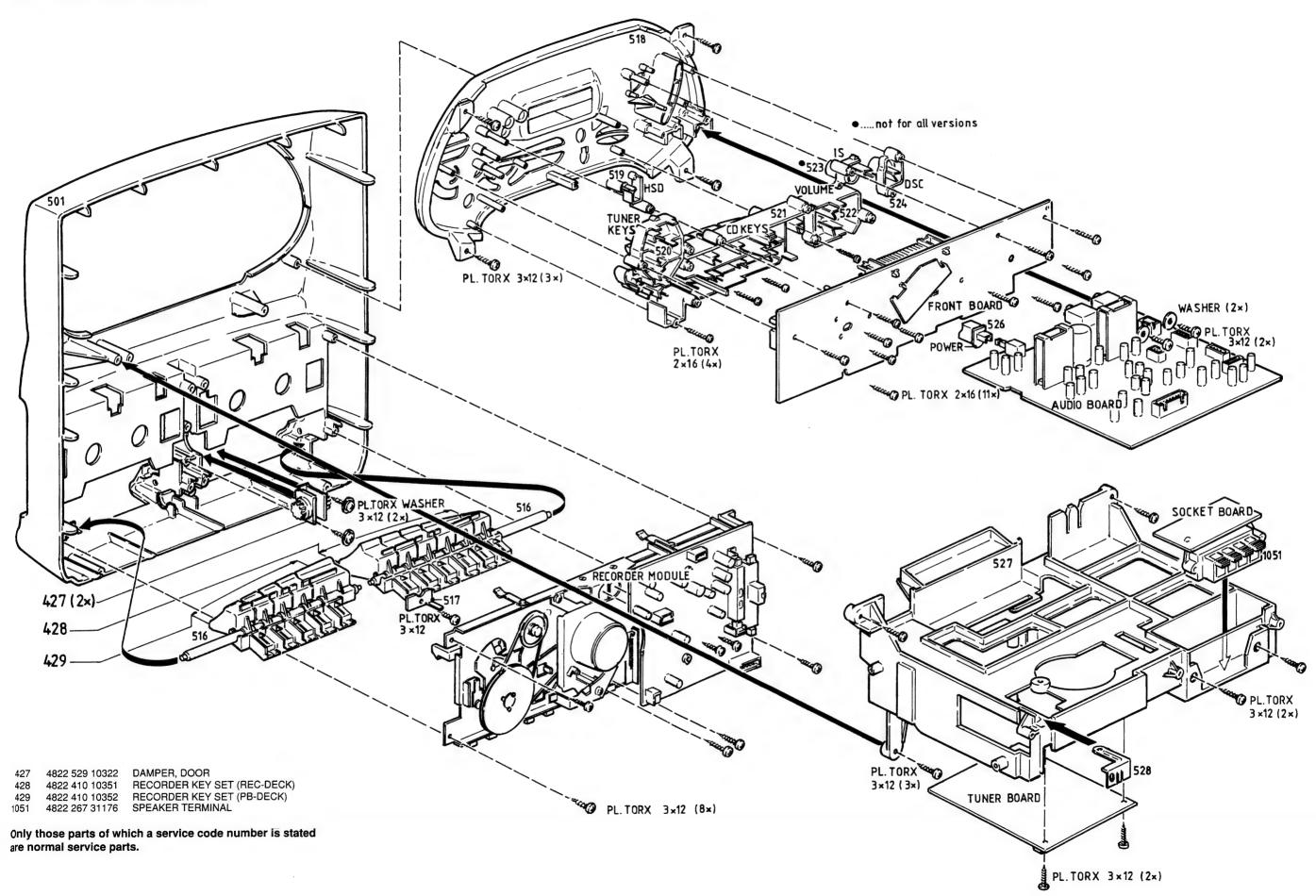
1010

4822 492 51733

4822 240 10099

CS 48 954

EXPLODED VIEW / Drawing 2



	IT BOARD LANEOUS				RESIST	TORS				
1400	4822 276 13587	SWITCH	TACT		3427©	4822 051 20332	3,3kΩ	5%	0,1W	
1401	4822 276 13587				3428©	4822 051 20332	$3,3k\Omega$	5%	0,1W	
1402	4822 276 13587					4822 117 11449	$2,2k\Omega$	1%	0,1W	
1403	4822 276 13587		TACT			4822 117 11139	1,5k Ω	1%	0,1W	
1404	4822 276 13587	SWITCH	TACT		3431 ©	4822 051 10102	1kΩ	2%	0,25W	
1405	4822 276 13587	SWITCH				4822 117 11449	2,2kΩ	1%	0,1W	
1406	4822 276 13587					4822 117 11449	2,2kΩ	1%	0,1W	
1407	4822 276 13587	SWITCH				4822 117 11449 4822 051 20333	$2,2k\Omega$ $33k\Omega$	1% 5%	0,1W 0,1W	
1408 1409	4822 276 13587 4822 276 13587	SWITCH SWITCH				4822 051 20473	$47k\Omega$	5%	0,1W	
1410	4822 276 13587	SWITCH	H TACT		3443©	4822 051 20181	180Ω	5%	0,1W	
1411	4822 276 13587	SWITCH			3445©	4822 051 20333	$33k\Omega$	5%	0,1W	
1412	4822 276 13587	SWITCH	1 TACT			4822 051 20104	100k Ω	5%	0,1W	
1413	4822 276 13587					4822 051 20333	$33k\Omega$	5%	0,1 W	
1414	4822 276 13587	SWITCH	H TACT		3449©	4822 117 11449	$2,2k\Omega$	1%	0,1W	
1415	4822 276 13587				3450 3451	4822 116 52217 4822 116 52256	270Ω $2.2k\Omega$	5% 5%	0,5W 0,16W	
1416 1417	4822 276 13587 4822 276 13587	SWITCH				4822 117 10833	10kΩ	1%	0,10 W	
1417	4822 276 13587				3453	4822 050 11002	1kΩ	5%	0,2W	
1419	4822 276 13587	SWITCH				4822 051 20223	22kΩ	5%	0,1W	
1420	4822 135 00035	LCD, LF	PH6352	-1	3459©	4822 117 11139	1,5kΩ	1%	0,1W	
7450	4822 130 10165	GP1U28	BXP, IN	-1 FRARED EYE	3460 ©	4822 117 11449	2,2kΩ	1%	0,1W	
	TODO					4822 116 52284 4822 117 11449	$47k\Omega$ 2,2k Ω	5% 1%	0,5W 0,1W	
CAPAC	SITORS				—— 3462 ©	4822 117 11449	2,2kΩ 47kΩ	5%	0,1VV 0,5W	
2401@	4822 124 11563	4,7µF	20%	6.3V	3403	4022 110 02204	7/1/22	J /6	0,000	
2401	4822 126 12882		20%	50V	3464©	4822 117 11449	$2.2k\Omega$	1%	0,1W	
	5322 122 34123	1nF		50V	3465	4822 116 52284	$47k\Omega$	5%	0,5W	
	5322 122 32531	100pF	5%	50V	3466	4822 116 83872	220Ω	5%	0,5W	
2450	4822 124 40246	4,7µF	20%	63V		4822 051 20471 4822 051 20471	470Ω 470Ω	5% 5%	0,1W 0,1W	
2460	4822 121 51387	10nF 10nF	20% 20%	16V 16V	34746	4822 051 20471	470Ω	5%	0,1W	
2461 2468	4822 121 51387 4822 122 33195	_	10%	50V		4822 117 11449	2,2kΩ	1%	0,1W	
2475	4822 121 51387	-	20%	16V		4822 051 10102	1kΩ	2%	0,25W	
	4822 122 33496			63V		4822 117 11449 4822 051 20473	$2,2k\Omega$ $47k\Omega$	1% 5%	0,1W 0,1W	
RESIST	TORS									
	1000 051 00000	600	EQ/	0.414/		4822 051 20473 4822 117 11449	47 k Ω 2,2k Ω	5%	0,1W 0,1W	
	4822 051 20689	68Ω	5%	0,1 W		4822 117 11449	2,2kΩ	1%	0,1W	
3400	4822 051 20689 4822 116 52191	33Ω	5%	0,5W	3484	4822 116 52271	33kΩ	5%	0,16W	
	4822 117 11449	2,2kΩ	1%	0,1W		4822 051 20333	33kΩ	5%	0,1W	
	4822 051 10102	1kΩ	2%	0,25W	3486	4822 116 52271	33kΩ	5%	0,16W	
3/103 ⊚	4822 117 11449	2,2kΩ	1%	0,1W	3487	4822 116 52271	33kΩ	5%	0,16W	
	4822 117 11449	2,2kΩ	1%	0,1W	3488	4822 116 52271	33kΩ	5%	0,16W	
	4822 117 11449	2,2kΩ	1%	0,1W		4822 117 10833	$10k\Omega$	1%	0,1W	
	4822 117 11449	$2,2k\Omega$	1%	0,1W	3490	4822 116 52283	$4,7k\Omega$	5%	0,5 W	
3407©	4822 117 11449	$2,2k\Omega$	1%	0,1W	2401	4822 116 83864	1040	5%	0,5W	
0.400@	4000 447 40000	101/0	10/	0,1W	3491 3492@	4822 117 10833	10kΩ 10kΩ	1%	0,5 V V	
	4822 117 10833 4822 117 10833	10kΩ 10kΩ	1% 1%	0,1W		4822 117 11449	2,2kΩ	1%	0,1W	
	4822 117 10833		1%	0,1W		4822 051 10102	1kΩ	2%	0,25W	
_	4822 117 10833	10kΩ	1%	0,1W		4822 117 11449	2,2kΩ	1%	0,1W	
3412	4822 116 52284	47kΩ	5%	0,5W	3496	4822 050 11002	1kΩ	5%	0,2W	
2/12/2	4922 117 10922	10kΩ	1%	0,1W		4822 117 10833	10kΩ	5% 1%	0,2VV 0,1W	
	4822 117 10833 4822 117 10833		1%	0,1W		4822 117 11449	2,2kΩ	1%	0,1W	
	4822 117 11449	2,2kΩ	1%	0,1W		4822 051 100080			•	
3416	4822 116 52213	180Ω	5%	0,5W						
	4822 117 11449	2,2kΩ	1%	0,1W	COILS					
3418	4822 116 83864	10kΩ	5%	0,5W	5401	4822 242 73769	CER. RE	SONA	TOR 4,19M	Hz
	4822 117 11449	$2,2k\Omega$	1%	0,1W						
3421	4822 116 52271	33kΩ	5%	0,16W	DIODE	S				
	4822 117 11449	2,2kΩ	1%	0,1W	2004	4000 105 00010	1 TL 401	AE ! =	D BACKLICL	T DIODI A
3423©	4822 117 10833	10kΩ	1%	0,1W	6301 6302	4822 135 00019 4822 135 00019	LTL-16K	AE, LE	D BACKLIGH	T DISPLA
3424	4822 116 52271	$33k\Omega$	5%	0,16W	6303	4822 135 00019				
	4822 051 20339	33Ω	5%	0,1W	6304	4822 135 00019			D BACKLIGH	TDISPLA
3426©	4822 051 20479	47Ω	5%	0,1W	6400	4822 130 31554	BZX79-F	-4V3		

FRONT BOARD DIODES		TUNER BOARD (ECO 5 PA)	
		CAFACITORS		
6401 4822 130 3062		2101© 5322 122 32531		50V
6402 4822 130 3062 6416 4822 130 10418		2102© 4822 122 33177		50V
6460 4822 130 1041		2103© 5322 122 34123 2104 4822 122 33195		50V 50V
6461 4822 130 1041		2106 4822 125 50355		
6462 4822 130 1041	B LTL16KGE, LED 'POP'	2106 4822 125 60101	3-11pF TRIMCAP.	not for FM/MW/LW version
		2107 4822 121 51319	1µF 20% 5	50V
TRANSISTORS		2108© 5322 122 32531	•	50V FM/MW/LW version
7402© 5322 130 4198	2 BC848B	2109© 5322 122 32448 2113© 5322 122 32448		50V FM/MW/LW version FM/MW/SW version
7403 © 5322 130 4198		2110 9 3022 122 02440	10pi 5% :	OOV FM/MW/SW version
7404© 5322 130 4198		2114© 4822 122 33177	10nF 20% 5	50V FM/MW/SW version
7405© 5322 130 4198		2115 4822 125 50355		FM/MW/SW version
7406© 5322 130 4198	B BC858B	2116© 5322 122 34123		FM/MW/SW version
7416© 5322 130 4198	2 BC848B	2117© 4822 122 33177 2118© 5322 122 32269		FM/MW/SW version
7460 © 5322 130 4198		2116@ 3322 122 32269	6,8pF 5% 5	FM/MW/SW version
7461© 5322 130 4198		2119© 4822 122 33891	3,3nF 10% 6	53V FM/MW/SW version
7462© 5322 130 4198		2120© 4822 126 13689		S3V FM/MW/SW version
INITEODATED ASSESSMEN	2	2120© 5322 122 31946	27pF 5% 5	FM/MW/LW version
INTEGRATED CIRCUIT	5	2120© 5322 122 32658	•	FM/AM version
7400© 4822 209 1315	TMP87CK20AF-JWLDV83251, μP	2122© 4822 122 33891	3,3nF 10% 6	FM/MW/LW version
7480© 4822 209 13156		2123 4822 121 51254	390pF 1% 40	OV FM/MW/LW version
		2125 4822 121 51381		00V
		2126© 5322 122 31863	330pF 5% 5	60V
		2127© 4822 122 32927		3V
		2128 4822 124 41579	10μF 20% 5	0V
		2129 4822 124 41584	100µF 20% 1	ov
		2130 4822 126 11585		0V
		2131@ 4822 122 33325		OV
		2132© 4822 122 33325	470nF 20% 5	OV
,		2133 4822 124 40242	1µF 20% 6	3V
		2134© 4822 122 33128	15nF 10% 6	3V not for USA
		2134© 5322 122 32654		3V for USA only
		2135 4822 124 40746	0,22µF 20% 6	3V
		2136© 4822 122 33128 2136© 5322 122 32654		3V not for USA 3V for USA only
		2137 4822 124 40746		,
		2138 4822 124 41576		3V 0V
		2140 4822 121 51252		3V not for FM/MW/SW version
		2140 4822 121 51319		OV FM/MW/SW version
		2141© 4822 122 31947		OV
		2142© 4822 122 31947		ΟV
		2143© 4822 122 32927		3V
		2144 4822 124 40242 2145© 4822 122 33575		3V
		2146© 4822 122 33575		0V 0V
			op. 0/0 0.	
		2147		OV.
		2148 4822 126 11585		OV N
		2149© 5322 122 32654 2150© 4822 122 31947		3V ov
		2152	33nF 10% 63	OV BV not for East Europe
		2152© 5322 116 80853	560pF 5% 63	BV for East Europe only
		2153© 4822 122 32139	12pF 5% 63	
		2153© 5322 122 32481	15pF 5% 50	
		2155 4822 125 60101 2156© 4822 122 31947	3-11pF TRIMCAP.	
			100nF 20% 50	
		2158© 5322 122 32448 2158© 5322 122 33538	10pF 5% 50	
		2158© 5322 122 33538 2159© 5322 122 32448	150pF 5% 63 10pF 5% 50	
		2159© 5322 122 32659	33pF 5% 50	V not for FM/MW/SW version
		2159© 5322 122 32659 2160© 5322 122 32654	33pF 5% 50 22nF 10% 63	V not for FM/MW/SW version V FM/AM version
		2160© 5322 122 32654	22nF 10% 63	V FM/AM version
				V FM/AM version V FM/MW/LW version
		2160© 5322 122 32654 2161© 4822 122 31947	22nF 10% 63 100nF 20% 50	V FM/AM version V FM/MW/LW version V FM/MW/SW version

表的。 我是我的自己的,一只是一只有人的自己的,我们就是我们就是我们,自己的人们就是我们的的人,我们的自己的人们的人们的人们,一个人们,这个人的人的人们也是不是这个人的

ELECTRICAL PARTSLIST

TUNER BOARD (E	CO 5 P	A)			RESIST	ORS		
2166© 5322 122 34123	1nF	10%	50V		4120©	4822 051 20008	CHIP JUMPER 0805	
2167© 4822 122 32139	12pF	5%	63V		4150©	4822 051 10008	CHIP JUMPER 1206	man and and the
RESISTORS					-	4822 051 20008 4822 051 10008	CHIP JUMPER 0805 CHIP JUMPER 1206	FM/MW/LW version
3101 © 4822 051 20473	47kΩ	5%	0,1W	not for East Europe		4822 051 10008	CHIP JUMPER 1206	
3101 © 4822 051 20562	$5,6k\Omega$	5%	0,1W	for East Europe only		4822 051 10008 4822 051 10008	CHIP JUMPER 1206 CHIP JUMPER 1206	FM/MW/LW version
3102© 4822 051 20104 3103© 4822 051 20183	100kΩ 18kΩ	5% 5%	0,1W 0,1W			4822 051 20008	CHIP JUMPER 0805	FM/MW/LW version
3104© 4822 051 20181	180Ω	5%	0,1W			4822 051 10008	CHIP JUMPER 1206	
3105 4822 116 83872	220Ω	5%	0,5W			4822 051 10008	CHIP JUMPER 1206	
3106© 4822 117 10833	10kΩ	1%	0,1W 0,1W	FM/MW/SW version		4822 051 10008 4822 051 20008	CHIP JUMPER 1206 CHIP JUMPER 0805	layout stage .7 onwards
3108© 4822 117 11449 3109© 4822 051 20332	$2,2k\Omega$ $3,3k\Omega$	1% 5%	0,1W	FM/MW/LW version FM/MW/LW version	4103	4022 031 20000	Of the OOM LIT COOS	ayout stage .7 onwards
3110 4822 116 52195	47Ω	5%	0,5W		COILS			
3114© 4822 051 20333	$33k\Omega$	5%	0,1W	FM/MW/SW version	5102	4822 157 71634	RF-COIL MW	
3115© 4822 051 20221	220Ω	5%	0,1W	FM/MW/SW version	5103	4822 157 71635	RF-COIL LW	
3116© 4822 051 20184 3117© 4822 051 20822	180kΩ 8,2kΩ	5% 5%	0,1W 0,1W	FM/MW/SW version FM/MW/SW version	5104 5105	4822 157 71128 4822 157 71129	RF-COIL SW RF-COIL SW	
3118© 4822 051 20104	100kΩ	5%	0,1W	FM/MW/SW version	5106	4822 157 53302	1μH	FM/MW/SW version
3120© 4822 117 11449	2,2kΩ	1%	0,1W	FM/MW/SW version	5109	4822 242 70665	CER. FILTER 10,7MHZ	
3121 © 4822 051 20479	47Ω	5%	0,1W	FM/MW/SW version	5110	4822 242 70665	CER. FILTER 10,7MHZ	
3122© 4822 117 11449 3123© 4822 051 20472	$2,2k\Omega$ $4,7k\Omega$	1% 5%	0,1W 0,1W	FM/MW/SW version FM/MW/LW version	5111 5112	4822 158 60511 4822 157 70302	AM-IF FILTER 450kHz AM-IF FILTER 450kHz	
3125© 4822 117 10833	10kΩ	1%	0,1W	FM/MW/LW version	5114	4822 157 70302	AM-IF FILTER 450kHz	(AM AFC)
3126© 4822 117 10833	10kΩ	1%	0,1W	FM/MW/SW version	5120	4822 242 10251	CER. DISCRIMINATOR 10	
3127© 4822 051 20223	22kΩ	5%	0,1W	FM/MW/SW version	5120	4822 242 82065	CER. DISCRIMINATOR 10	.7MG40K
3128© 4822 117 11449 3132 4822 116 52195	2,2kΩ 47Ω	1% 5%	0,1W 0,5W	FM/MW/LW version	5121	4822 242 10261	QUARTZ 75kHz OSC. COIL LW	
3132 4822 116 52195 3133© 4822 117 10833	10kΩ	1%	0,1W	FM/MW/SW version	5122 5123	4822 157 60517 4822 157 60517	OSC. COIL MW	
3134© 4822 051 20224	220kΩ	5%	0,1W		5124	4822 157 71127	OSC. COIL SW	
3136© 4822 117 11449	2,2kΩ	1%	0,1W	FM/MW/SW version	5126	4822 157 52333	100µH	FM/MW/SW version
3137© 4822 051 20223 3140© 4822 051 20008	22kΩ CHIP JI	5%	0,1W 0805	FM/MW/LW version 5120=CDA10.7MG40K	5127	4822 157 62552	2,2µH RF COIL 1.5 TURNS	FM/MW/SW version
3140© 4822 117 10353	150Ω	5%		5120=CDA10.7MG61KA	5130 5131	4822 156 30947 4822 156 30947	RF COIL 1,5 TURNS	
3141© 4822 051 20563	56kΩ	5%	0,1W		DIODE	S		
3142 4822 100 11163 3145© 4822 117 11449	100kΩ ¯ 2,2kΩ	TRIMPC	0,1W			1000 100 00011	DA404	
3146© 4822 051 20229	22Ω	5%	0,1W		6102 6103	4822 130 32214 4822 130 30621	BA484 1N4148	FM/MW/SW version
3152 4822 116 52224	470Ω	5%	0,5W		6104	4822 130 30621	1N4148	
3153© 4822 051 20471	470Ω	5%	0,1W		6105©			ot for FM/MW/SW version
3154 4822 116 52206	120Ω	5%	0,5W		6106	4822 130 30621	1N4148	FM/MW/SW version
3155 © 4822 051 20229	22Ω	5%	0,1W		6107	4822 130 34488	BZX79-C11	
3156 4822 051 20104	100kΩ 100kΩ	5% 5%	0,1W 0,5W	for /01/11 only for East Europe only	6109	4822 130 30621	1N4148	FM/MW/SW version
3157 4822 116 52234	100822	370	0,011	to Last Larope only		4822 130 83145	HN2V02H-B 1N4148	FM/MW/SW version not for /01/11
3158 4822 116 52224	470Ω	5%	0,5W		6120 6130©	4822 130 30621 4822 130 82833	1SV228	10(10(70)71)
3159 4822 116 52224 3160 4822 116 52224	470Ω 470Ω	5% 5%	0,5W 0,5W					
3160 4822 116 52224 3161 4822 116 52224	470Ω	5%	0,5W		6131 ©	4822 130 82833	1SV228	
3167© 4822 051 20121	120Ω	5%	0,1W		TRANS	SISTORS		
3168© 4822 117 10353	150Ω	5%	0,1W		7102	4822 130 60093	2SA838B	
3169© 4822 051 20154	150kΩ 100kΩ	5% 5%	0,1W	notiorFM/MW/LW Europe	7104	5322 130 44779	BC338-40	FM/MW/LW version
3170 4822 116 52234				and FM/MW/SW versions	7105	5322 130 44779	BC338-40	FM/MW/LW version
3173 4822 116 52219 4101 © 4822 051 20008	330Ω CHIP JI	5% UMPER	0,5W 0805	FM/AM version	7106© 7107	5322 130 42136 4822 130 60093	BC848C 2SA838B	FM/MW/SW version FM/MW/SW version
4102© 4822 051 20008	CHIP J	UMPER	0805	FM/AM version	7109©	5322 130 41983	BC858B	not for FM/AM version
4102 © 4822 051 20334	330k Ω	5%	0,1W	FM/MW/LW version	7111©	5322 130 42136	BC848C not for i	FM/MW/LW version Europe
4103© 4822 051 20008		UMPER UMPER				5322 130 42136	BC848C	FM/MW/SW version
4104© 4822 051 20008 4105© 4822 051 20008		UMPER				5322 130 42136 5322 130 42136	BC848C BC848C	FM/MW/SW version FM/MW/LW version
4106© 4822 051 20008	CHIP J	UMPER	0805		7123©	5322 130 42136	BC848C	FM/MW/SW version
4107 @ 4822 051 20008	CHIP J	UMPER	0805	FM/MW/SW version		5322 130 42136	BC848C	FM/MW/LW version
4108© 4822 051 20008 4109© 4822 051 20008	-	UMPER UMPER		not for FM/MW/SW version FM/MW/SW version	INTEG	RATED CIRCUITS		
4110© 4822 051 10008	CHIP J	UMPER	1206	FM/MW/SW version		4822 209 90924	TEA5757H/V1, RADIO	IC
4111© 4822 051 20008	CHIP J	UMPER	0805		/1019	+022 203 30324	TEASTS/TITY I, HADIO	
								CS 48 958

AUDIO BOARD	-					_
	ΑU	DIO	BC)AR	D	

MISCE	ELLANEOUS					CAPACITORS						
1051 1260 1268 1268 1268	4822 267 31176 4822 276 13483 4822 253 50137 4822 071 52002 4822 071 52502	SWITC FUSE FUSE	Γ 2,5A UI Γ 2A IEC	, POWER L	for AZ2805/17 only for AZ2805 for AZ2808	2352 2354 2355 2356 2357	4822 122 33169 4822 124 40433 4822 124 40433 4822 124 41407 4822 124 41407	680pF 47μF 47μF 0,47μF 0,47μF	10% 20% 20% 20% 20%	50V 25V 25V 63V 63V	for AZ2808 only for AZ2808 only for AZ2808 only for AZ2808 only for AZ2808 only	
1268 1270 1330	4822 252 51121 4822 265 10489 4822 267 31468	SOCKE	ET MICR	O 3,5MM . PPH. 3,5MM		2361 2362 2363 2380	4822 124 40196 4822 124 40433 4822 124 40433 4822 124 41525	220μF 47μF 47μF 100μF	20% 20% 20% 20%	16V 25V 25V 25V		
CAPA	CITORS					2381	4822 124 40746	0,22µF	20%	63V		
2250 2251 2252 2252 2254	4822 124 40746 4822 124 40746 4822 124 40784 4822 124 41458 4822 126 11585	3300µF		63V 63V 16V 16V 50V	for AZ2805 only for AZ2808 only	2382 2383 2384 2385 2386	4822 122 33195 4822 121 51387 4822 121 51387 4822 121 51387 4822 122 33197	100pF 10nF 10nF 10nF 1nF	10% 20% 20% 20% 10%	50V 16V 16V 16V 50V		
2255 2257 2270 2271 2274	4822 124 40433 4822 122 33197 4822 124 40746 4822 124 40746 4822 122 33197	47μF 1nF 0,22μF 0,22μF 1nF	20% 10% 20% 20% 10%	25V 50V 63V 63V 50V		2387 2388 2389 2390 2391	4822 124 41579 4822 124 41579 4822 122 33197 4822 122 33197 4822 124 41596	10µF 10µF 1nF 1nF 22µF	20% 20% 10% 10% 20%	50V 50V 50V 50V		
2275 2276 2277 2278 2279	4822 122 33197 4822 121 41857 4822 121 41857 4822 121 41856 4822 121 41856	1nF 10nF 10nF 22nF 22nF	10% 5% 5% 5% 5%	50V 250V 250V 250V 250V		2392 2393 2394 2395 2396	4822 122 33197 4822 124 40433 4822 124 41525 4822 126 12882 4822 126 12882	1nF 47µF 100µF 100nF 100nF	10% 20% 20% 20% 20%	50V 25V 25V 50V 50V		
2280 2281 2282 2283 2284	4822 124 40246 4822 124 40246 4822 126 12339 4822 126 12339 4822 124 40242	4,7µF 4,7µF 2,2nF 2,2nF 1µF	20% 20% 10% 10% 20%	63V 63V 16V 16V 63V		2550 2551 2552 2553 2554	4822 121 43856 4822 121 43856 4822 122 10466 4822 122 10466 4822 122 33848	4,7nF 4,7nF 220pF 220pF 47pF	5% 5% 10% 10% 5%	250V 250V 50V	for AZ2808 only for AZ2808 only for AZ2808 only for AZ2808 only for AZ2808 only	
2285 2286 2287 2288 2289	4822 122 33197 4822 124 41576 4822 124 40433 4822 124 40246 4822 124 40246	1nF 2,2µF 47µF 4,7µF 4,7µF	10% 20% 20% 20% 20%	50V 50V 25V 63V		2555 2560 2561 2562 2563	4822 122 33848 4822 121 51379 4822 121 51379 4822 121 41857 4822 121 41857	47pF 82nF 82nF 10nF 10nF	5% 10% 10% 5% 5%	50V 63V 63V 250V 250V	for AZ2808 only for AZ2808 only for AZ2808 only for AZ2808 only for AZ2808 only	
2292 2293 2301 2302 2303	4822 126 11585 4822 126 11585 4822 124 41579 4822 124 40433 4822 124 40242	22nF 22nF 10µF 47µF 1µF	20% 20% 20% 20% 20%	50V 50V 50V 25V 63V		2564 2565 2566 2567 2568	4822 124 40433 4822 124 40246 4822 124 40246 4822 122 33848 4822 122 33848	47μF 4,7μF 4,7μF 47pF 47pF	20% 20% 20% 5% 5%	25V 63V 63V 50V 50V	for AZ2808 only for AZ2808 only for AZ2808 only for AZ2808 only for AZ2808 only	
2304 2305 2306 2307 2308	4822 124 40242 4822 124 41584 4822 124 41584 4822 122 33197 4822 122 33197	1µF 100µF 100µF 1nF	20% 20% 20% 10%	63V 10V 10V 50V 50V		2569 2570 2571 2572	4822 122 33848 4822 122 33848 4822 126 12339 4822 126 12339	47pF 47pF 2,2nF 2,2nF	5% 5% 10% 10%	50V 50V 16V 16V	for AZ2808 only for AZ2808 only for AZ2808 only for AZ2808 only	
2310 2313 2314 2330 2331	4822 124 40196 4822 122 33197 4822 122 33197 4822 124 40433 4822 124 40433	220µF 1nF 1nF 47µF 47µF	20% 10% 10% 20% 20%	16V 50V 50V 25V 25V	tor AZ2805 only	3250 3251 3252 3253 3254	4822 116 52224 4822 116 52256 4822 116 52256 4822 050 18208 4822 050 18208	470Ω 2,2kΩ 2,2kΩ 8,2Ω 8,2Ω	5% 5% 5% 1%	0,5W 0,16W 0,16W 0,4W 0,4W		
2332 2333 2334 2335 2336	4822 126 12882 4822 126 12882 4822 122 33169 4822 122 33169 4822 124 41596	100nF 100nF 680pF 680pF 22µF	20% 20% 10% 10% 20%	50V 50V 50V 50V 50V	for AZ2805 only	3255 3256 3257 3258 3259	4822 050 18208 4822 050 11002 4822 116 52219 4822 116 52283 4822 116 52283	8,2Ω 1kΩ 330Ω 4,7kΩ 4,7kΩ	1% 5% 5% 5% 5%	0,4W 0,2W 0,5W 0,5W 0,5W		
2337 2340 2341 2342 2343	4822 124 40433 4822 124 40433 4822 124 40433 4822 124 41407 4822 124 41407	47μF 47μF 47μF 0,47μF 0,47μF	20% 20% 20% 20% 20%	25V 25V 25V 63V 63V		3260 3261 3267 3269 3270	4822 116 52256 4822 116 52256 4822 116 52283 4822 116 83864 4822 116 52252	2,2kΩ 2,2kΩ 4,7kΩ 10kΩ 180kΩ	5% 5% 5% 5% 5%	0,16W 0,16W 0,5W 0,5W 0,5W		
2344 2345 2349 2350 2351 CS 48	4822 124 41997 4822 124 41997 4822 124 40433 4822 124 41596 4822 124 40433	470μF 470μF 47μF 22μF 47μF	20% 20% 20% 20% 20%	10V 10V 25V 50V 25V	for AZ2805 only for AZ2805 only for AZ2808 only for AZ2808 only for AZ2808 only	3271 3272 3273	4822 116 52297 4822 116 52297 4822 116 52252	68kΩ 68kΩ 180kΩ	5% 5% 5%	0,5W 0,5W 0,5W		
J J 40												

ELECTRICAL PARTSLIST

AUDI 3580	10 BOARD 4822 116 83864	10kΩ	5%	0,5W	for AZ2808 only				
RESIS ¹		10/22	378	0,5**	Idi A22000 Only	INTEGR	RATED CIRCUITS		
3581	4822 116 83864	10kΩ	5%	0,5W	for AZ2808 only		4822 209 32919	HEF4952BT	
3582	4822 050 11002	1kΩ	5%	0,2W	for AZ2808 only	7330	4822 209 31544	TA8227P, POWER STAGE	
583	4822 050 11002	1kΩ	5%	0,2W	for AZ2808 only	7331	4822 209 31544	TA8227P, POWER STAGE	for AZ2808 or
584 585	4822 116 52283 4822 116 52283	4,7kΩ 4,7kΩ	5% 5%	0,5W 0,5W	for AZ2808 only for AZ2808 only		4822 209 63709 5322 209 11102	LM324D, 4-FOLD OPAMP. HEF4052BT	for AZ2808 or for AZ2808 or
E00	4000 116 50040	1.01/0	E0/	0.46/4/	A 70000 I				
3586 3587	4822 116 52249 4822 116 52249	1,8k Ω 1,8k Ω	5% 5%	0,16W 0,16W	for AZ2808 only for AZ2808 only				F
3588	4822 116 52304	$82k\Omega$	5%	0,5W	for AZ2808 only				
589	4822 116 52304	82kΩ	5%	0,5W	for AZ2808 only				
COILS									
5250 5251	4822 157 62552 4822 157 62552	2,2µH 2,2µH							
5252	4822 157 53302	2,2μΠ 1μΗ							
DIODE	S								
6250	5322 130 30684	▲ 1N4002		·	for AZ2805 only				
3250	5322 130 80686				for AZ2808 only				
3251	5322 130 30684				for AZ2805 only				
3251 3252	5322 130 80686 A 5322 130 30684 A				for AZ2808 only for AZ2805 only				
3252	5322 130 80686 4	∆ 1N5392			for AZ2808 only				
3253	5322 130 30684				for AZ2805 only				
253	5322 130 80686				for AZ2808 only				
254	5322 130 31504	BZX79-F	-3V3						
255	4822 130 30621	1N4148							
3256 3257	4822 130 30621 4822 130 30621	1N4148 1N4148							
258	4822 130 30621	1N4148							
5259	4822 130 30621	1N4148							
301	4822 130 30621	1N4148							
350	4822 130 30621	1N4148							
351	4822 130 30621	1N4148							
5380	4822 130 30621	1N4148 1N4148							
3381 3382	4822 130 30621 4822 130 30621	1N4148							
383	4822 130 34488	BZX79-0	211V						
384	4822 130 30621	1N4148							
RANS	SISTORS								
7250	5322 130 60068	BC558C							
'251 '252	4822 130 44196 4822 130 41327	BC548C BC327-4							
253	4822 130 41327	BC327-4							
254	4822 130 41327	BC327-4							
255	4822 130 41327	BC327-4	-0						
256	4822 130 41327	BC327-4							
7262	4822 130 40937	BC548B BC549C							
7270 7271	4822 130 44246 4822 130 44246	BC549C							
273	4822 130 40937	BC548B							
274	4822 130 44196	BC548C							
275	4822 130 44196	BC548C							
730 0 730 1©	4822 130 44196 4822 130 61067	BC548C XN1401	(DOUE	BLE PNP)					
	4822 130 61067			BLE PNP)					
7360	4822 130 40937	BC548B	,2001	,					
380	4822 130 44197	BC558B							
381	4822 130 44196	BC548C							*
382	4822 130 44196	BC548C							
383	4822 130 44196	BC548C	•						
384	4822 130 41327	BC327-4	0						

ELECTRICAL PARTSLIST

AUD	IO BOARD										
RESIS	TORS					3346 RESIS	4822 116 83872 TORS	220Ω	5%	0,5W	
3274	4822 116 52244	15kΩ	5%	0,5W		3347	4822 116 83872	220Ω	5%	0,5W	
3275	4822 116 52244	$15k\Omega$	5%	0,5W		3350	4822 116 52271	$33k\Omega$	5%	0,16W	
3276	4822 116 52284	$47k\Omega$	5%	0,5W		3351	4822 116 52271	$33k\Omega$	5%	0,16W	
3277	4822 116 52284	$47k\Omega$	5%	0,5W		3354	4822 116 52175	100Ω	5%	0,5W	
3278	4822 116 52257	22kΩ	5%	0,5 W		3355	4822 116 52175	100Ω	5%	0,5W	
3279	4822 116 52257	22kΩ	5%	0,5W		3356	4822 116 52271	33kΩ	5%	0,16W	
3280	4822 116 52239	120kΩ	5%	0,5W		3357	4822 116 52271	33kΩ	5%	0,16W	
3281	4822 116 52239	120kΩ	5%	0,5W		3358	4822 116 52244	15kΩ	5%	0,5W	
3282 3283	4822 116 52264 4822 116 52264	$27 \mathrm{k}\Omega$ $27 \mathrm{k}\Omega$	5% 5%	0,5W 0,5W		3359 3360	4822 116 52244 4822 116 52284	15kΩ 47kΩ	5% 5%	0,5W 0,5W	
3284	4822 116 83874	220kΩ	5%	0,5W		3361	4822 116 52257	22kΩ	5%	0,5W	
3285	4822 116 83874	220kΩ	5%	0,5W		3362	4822 116 52257	22kΩ	5%	0,5W	
3286	4822 116 52224	470Ω	5%	0,5W		3364	4822 116 52291	56kΩ	5%	0,5W	
3287	4822 116 52224	470Ω	5%	0,5W		3365	4822 116 52291	56kΩ	5%	0,5W	
3288	4822 116 52256	$2,2k\Omega$	5%	0,16W		3380	4822 116 83868	150 Ω	5%	0,5W	
3289	4822 116 52256	2,2kΩ	5%	0,16W		3381	4822 116 52256	2,2kΩ	5%	0,16W	
3292	4822 116 52224	470Ω	5%	0,5W		3382	4822 116 52256	2,2kΩ	5%	0,16W	
3293	4822 116 52257	$22k\Omega$	5%	0,5W		3383	4822 116 52234	100k Ω	5%	0,5W	
3294	4822 116 52285	470kΩ	5%	0,5W		3384	4822 116 52235	1ΜΩ	5%	0,5W	
3295	4822 116 52257	22kΩ	5%	0,5 W		3385	4822 116 52285	470kΩ	5%	0,5W	
3296	4822 116 52224	470Ω	5%	0,5W		3386	4822 116 52283	$4,7k\Omega$	5%	0,5W	
3297	4822 116 52234	100 k Ω	5%	0,5W		3387	4822 050 11002	1kΩ	5%	0,2W	
3298	4822 116 52234	100kΩ	5%	0,5W		3388	4822 116 52257	22kΩ	5%	0,5W	
3299	4822 116 52184	18Ω	5%	0,5W		3389	4822 116 83864	10kΩ	5%	0,5W	
3300	4822 116 52245	150kΩ	5%	0,16W		3390	4822 116 83864	10kΩ	5%	0,5 W	
3301	4822 116 52234	100kΩ	5%	0,5W		3391	4822 116 83864	10kΩ	5%	0,5W	
3302	4822 116 52284	47kΩ	5%	0,5W		3392	4822 116 83864	10kΩ	5%	0,5W	
3303	4822 116 52249	$1,8k\Omega$ $2,2k\Omega$	5% 5%	0,16W 0,16W		3393 3394	4822 116 52256	2,2kΩ	5%	0,16W	for AZ2805 only
3304 3305	4822 116 52256 4822 116 52256	$2,2k\Omega$	5%	0,16W		3395	4822 116 52256 4822 116 52184	2,2kΩ 18Ω	5% 5%	0,16W 0,5W	for AZ2805 only
3306	4822 116 52263	2,7kΩ	5%	0,5W		3396	4822 116 52176	10Ω	5%	0,5W	
3307	4822 116 52263	$2.7k\Omega$	5%	0,5W		3397	4822 116 52224	470Ω	5%	0,5W	
3308	4822 116 52226	560Ω	5%	0,5W		3398	4822 116 52257	$22k\Omega$	5%	0,5W	
3310	4822 116 52224	470Ω	5%	0,5W		3550	4822 116 52234	$100k\Omega$	5%	0,5W	for AZ2808 only
3311	4822 116 52224	470Ω	5%	0,5W		3551	4822 116 52234	100kΩ	5%	0,5W	for AZ2808 only
3312	4822 116 52244	15k Ω	5%	0,5W		3552	4822 116 52234	$100 k\Omega$	5%	0,5W	for AZ2808 only
3313	4822 116 52244	15kΩ	5%	0,5W		3553	4822 116 52234	100kΩ	5%	0,5W	for AZ2808 only
3314	4822 116 52269	3,3kΩ	5%	0,5W		3554	4822 116 83878	270kΩ	5%	0,5W	for AZ2808 only
3315 3316	4822 116 52269 4822 116 83864	3,3kΩ 10kΩ	5% 5%	0,5W 0,5W		3555 3556	4822 116 83878 4822 116 52234	270kΩ 100kΩ	5% 5%	0,5W 0,5W	for AZ2808 only for AZ2808 only
3317	4822 116 83864	10kΩ	5%	0,5W		3557	4822 116 52234	100kΩ	5%	0,5W	f 470000 ash
3318	4822 052 10478		5%	NFR		3558	4822 116 52284	47kΩ	5%	0,5W	for AZ2808 only for AZ2808 only
3320	4822 116 52175	100Ω	5%	0,5W		3559	4822 116 52284	47kΩ	5%	0,5W	for AZ2808 only
3321	4822 116 52175	100Ω	5%	0,5W		3560	4822 116 52291	$56k\Omega$	5%	0,5W	for AZ2808 only
3322	4822 116 52224	470Ω	5%	0,5W		3561	4822 116 52291	56kΩ	5%	0,5W	for AZ2808 only
3323	4822 116 52224	470Ω	5%	0,5W		3562	4822 116 52234	100kΩ	5%	0,5W	for AZ2808 only
3326	4822 116 52224	470Ω	5%	0,5W		3562	4822 116 52245	150kΩ	5%	0,5W	layout stage .5 onwards
3327	4822 116 52224	470Ω	5%	0,5W		3563	4822 116 52234	100kΩ	5%	-0,5W	for AZ2808 only
3328	4822 116 52213	180Ω 470Ω	5% 5%	0,5W 0,5W		3563 3564	4822 116 52245	150kΩ	5%	0,5W	layout stage .5 onwards
3330	4822 116 52224	47052	3%	0,5		3364	4822 116 52234	100kΩ	5%	0,5 W	for AZ2808 only
3331 3332	4822 116 52224 4822 050 11002	470Ω 1kΩ	5% 5%	0,5W 0,2W	for AZ2805 only for AZ2808 only	3565 3566	4822 116 52234 4822 116 52283	$100k\Omega$ $4.7k\Omega$	5%	0,5W 0,5W	for AZ2808 only
3332	4822 116 52206	120Ω	5%	0,2VV	for AZ2805 only	3567	4822 116 52283	$4,7$ k Ω	5% 5%	0,5W	
3333	4822 116 52206	120Ω	5%	0,5W	for AZ2805 only	3568	4822 116 52284	47kΩ	5%	0,5W	layout stage .4 only
3334	4822 052 10109 🛦		5%	0,33W		3569	4822 116 52284	$47k\Omega$	5%	0,5W	layout stage .4 only
3335	4822 116 52206	120Ω	5%	0,5W	for AZ2808 only	3570	4822 116 52234	100kΩ	5%	0,5W	for AZ2808 only
3337	4822 116 83872	220Ω	5%	0,5W		3571	4822 116 52234	$100k\Omega$	5%	0,5W	for AZ2808 only
3338	4822 116 83872	220Ω	5%	0,5W		3572	4822 116 52256	2,2kΩ	5%	0,16W	for AZ2808 only
3340	4822 116 52224	470Ω	5%	0,5W	for AZ2808 only	3573 3574	4822 116 52256	2,2kΩ	5%	0,16W	for AZ2808 only
3341	4822 050 11002	1kΩ	5%	0,2W	for AZ2808 only	3574	4822 116 52222	390Ω	5%	0,16W	for AZ2808 only
3342	4822 116 52206	120Ω	5%	0,5W	for AZ2808 only	3575	4822 116 52222	390Ω	5%	0,16W	for AZ2808 only
3344	4822 116 52224	470Ω 470Ω	5% 5%	0,5W		3576 3577	4822 116 52283	4,7kΩ	5%	0,5W	for AZ2808 only
3345	4822 116 52224	470Ω	5%	0,5W		3577	4822 116 52283	$4,7$ k Ω	5%	0,5W	for AZ2808 only

CS 48 960

Service Service A97-351

Service

Product Service Group CE Audio

Service Information

Already published Service Informations: none

CORRECTIONS TO THE SERVICE MANUAL

FRONT BOARD

* Correct code number for resistor 3426 is : $3426 ext{ } 47\Omega ext{ } 5\% ext{ } 0,16W ext{ } 4822 ext{ } 116 ext{ } 52195$

MECHANICAL PARTSLIST

* Correct code number for "mains socket IEC" is: 1000 A 4822 265 20318 mains socket IEC

CHANGES IN COURSE OF PRODUCTION

ECO5 TUNER - BOARD

* To improve locking accuracy after switching FM-mode on when the desired transmitter is disturbed, 3101 was changed to 33k.

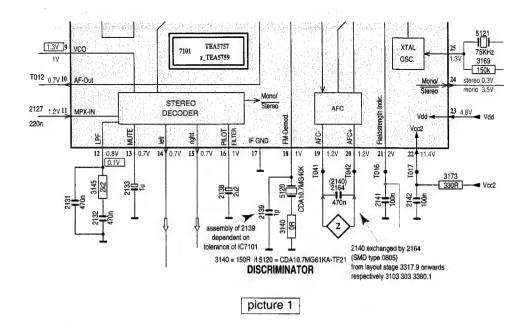
3101 © 33k 5% 0,1W 4822 051 20333

* To improve locking accuracy after search mode, 2139 was added in parallel to discriminator 5120.

2139 © 1pF 20% 50V 5322 122 32447

remark: component was already implemented in the layout. Assembly is dependent on tolerance of IC7101. see picture 1 next page.

GB 4822 725 26013



* From production week 9703 onwards layout of the printed circuit board has been changed to layout stage 3103 303 3380.1 (The layout stage can be identified by the last digit of the 12-figure number, printed in the copper pattern) attention: code number 3103 303 3317.8 of copper pattern exchanged by new code number 3103 303 3380.1 → the change status begins therefore with .1 again.

reason: - IF- buffer-amplifier added (provisional for Japanese version only)

- SMDs type 1206 changed to smaller SMD type 0805

2127 ©	220nF	+80/-20%	50V	4822 126 13473			
2131 ©	470nF	+80/-20%	16V	4822 126 13482			
2132 ©	470nF	+80/-20%	16V	4822 126 13482			
2141 ©	100nF	20%	25V	4822 126 10002			
2142 ©	100nF	20%	25V	4822 126 10002			
2143 ©	220nF	+80/-20%	50V	4822 126 13473			
2161 ©	100nF	20%	25V	4822 126 10002			
2163 ©	100nF	20%	25V	4822 126 10002			
2165 ©	100nF	20%	25V	4822 126 10002			
2140 replaced by 2164 SMD type 0805 (see picture 1)							
2164 ©	470nF	+80/-20%	16V	4822 126 13482			

For the new assembly drawing see attached sheet 7-2-1. (for the Shortwave-version AZ2808/11 use same drawing, but adjustment table of service manual chapter 7-4)

* Adjustment table

Varicap-voltage for 1602kHz was changed to $6.9V\pm0.5V$ for FM/MW-versions. reason: correction

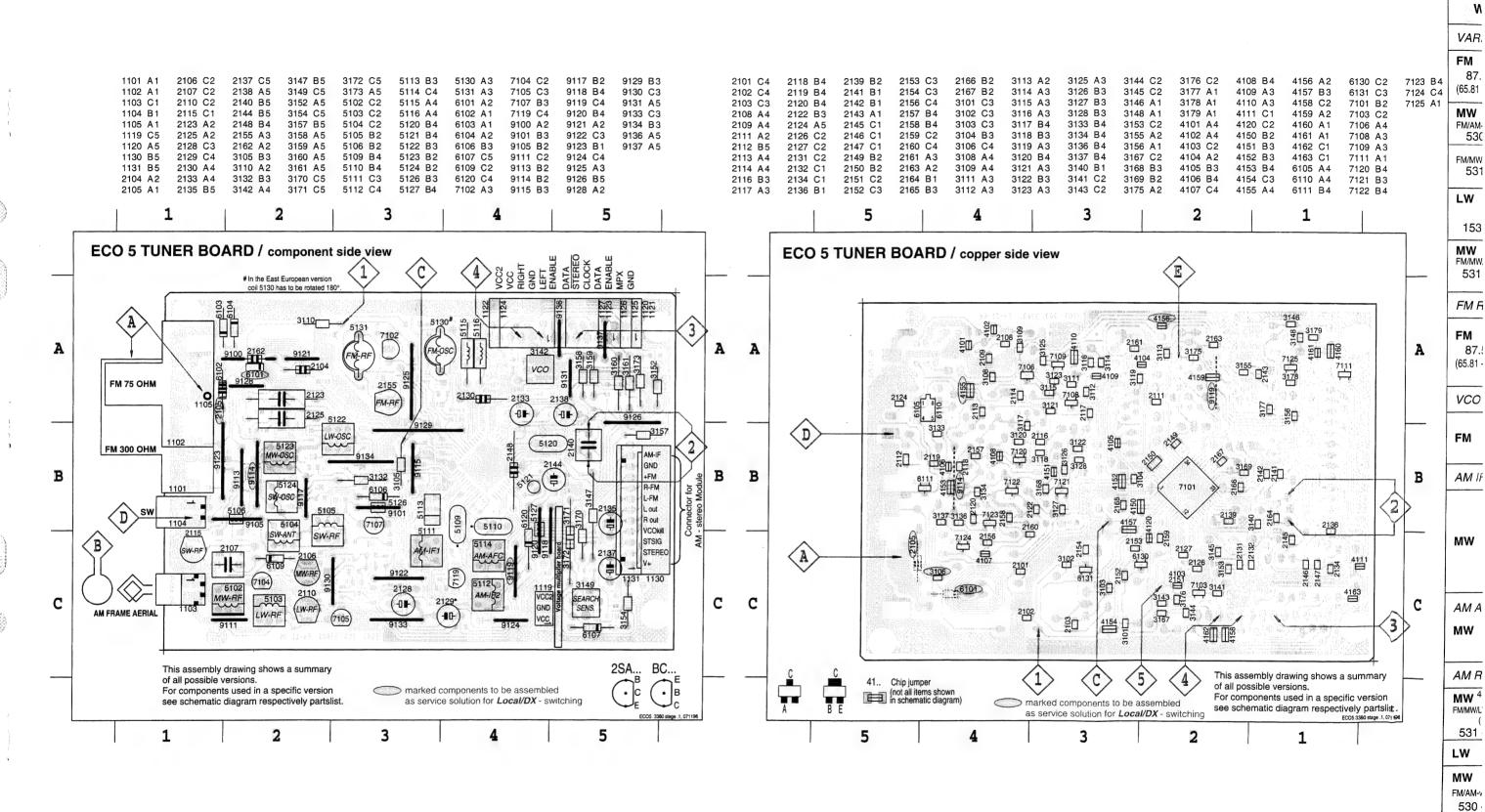
For the new adjustment table see attached sheet 7-2-1.

RECORDER BOARD

* From production week 9638 onwards 2721 and 2722 have been changed:

2721 changed to Polcap-type 4822 121 43144 22nF 10% 50V reason: improvement of bias-modulation at high temperatures.

2722 changed from 3,3nF to 4822 126 11714 4,7nF 20% 50V reason: increase of bias-amplitude.



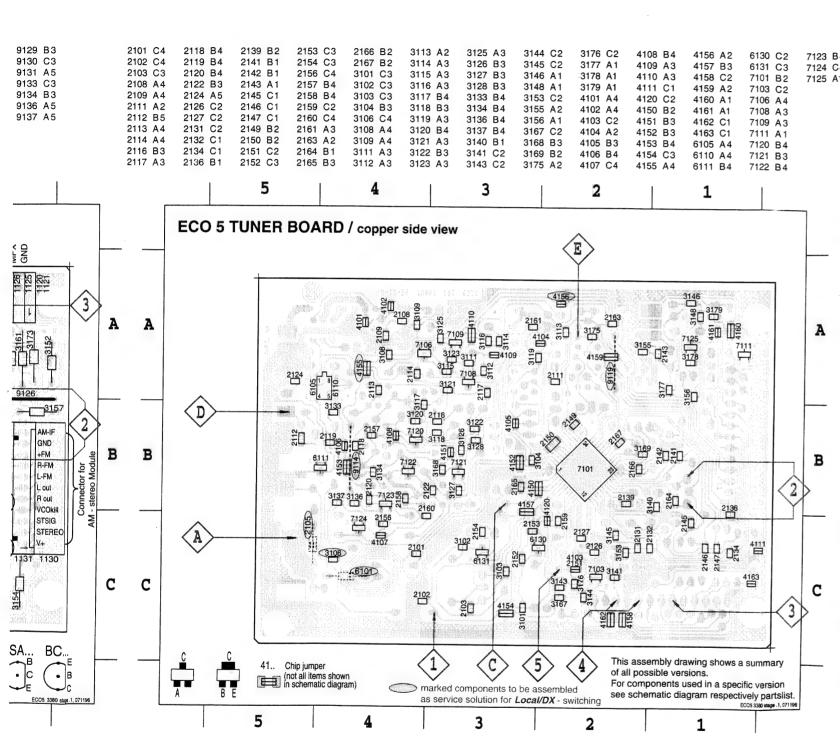
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TUN

(input 2) RC ne

3) For All

⁴⁾ MW ha



TUNER ADJUSTMENT TABLE (ECO5 FM/MW- and FM/MW/LW - versions with AM-frame aerial)

Waverange	Input frequency	Input	Tuned to	Adjust	Output	Scope/Voltmeter
VARICAP ALIGNME	:NT					
FM		T	108MHz	5130		8V ±0.2V
87.5 - 108MHz (65.81 - 74, 87.5 - 108MHz)			87.5MHz (65.81MHz)	check	-	4.3V ±0.5V (1.2V ±0.5V)
MW FM/AM-version, 10kHz grid			1700kHz	5123		8V ±0.2V
530 - 1700kHz			530kHz	check		1.1V ±0.4V
FM/MW-version, 9kHz grid 531 - 1602kHz			1602kHz	5123		6.9V ±0.2V
			531kHz	check		1.1V ±0.4V
LW			279kHz	5122	-	8V ±0.2V
153 - 279kHz	,		153kHz	check		1.1V ±0.4V
MW FM/MW/LW- version, 9kHz grid			1602kHz	5123		8V ±0.2V
531 - 1602kHz			531kHz	check		1.1V ±0.4V
FM RF			and the second of the second o	Andrew Company		en e
FM 87.5 - 108MHz	108MHz	A	108MHz	2155		MAX
65.81 - 74, 87.5 - 108MHz)	87.5MHz (65.81MHz)	mod=1kHz Δf=±22.5kHz	87.5MHz (65.81MHz)	5131	4	
VCO			The state of the s		- wa 	Terrorian de la servicio del servicio de la servicio della servici
FM	98MHz, 1mV continuous wave	(A)	98MHz	3142	3>	152kHz ±1kHz ¹⁾
AM IF	Territoria de la Companio de la Com Per la Companio de l					
MW	450kHz	⟨Ĉ⟩	IC 7101 36 1100nF	5111	<u>4</u> >	Max.
	connect pin 26 of IC 7101 (AM Osc.) with short wire to	$\Delta f=\pm 15 \text{kHz}$ $V_{RF}=3 \text{mV}$	IC 7101 40 + 100nF see remark 2)	5112	•	symmetric
AM AFC MW	ground (pin 4)	continuous wave		5114	2>	0 ± 2 mV DC
AM RF ³⁾						
MW ⁴⁾ FM/MW/LW- and FM/MW-version	1494kHz	(B)	1494kHz	2106	***************************************	er garage and indicate standing and standing and standing and standing and standing and standing and standing a
(9kHz grid) 531 - 1602kHz	558kHz	X	558kHz	5102		
LW	198kHz		198kHz	5103	$\langle 4 \rangle$	max.
MW	1500kHz	$\Delta f = \pm 30 \text{kHz}$	1500kHz	2106	-	symmetric
FM/AM-version, 10kHz grid 530 - 1700kHz	560kHz	V _{RF} as low as	560kHz	5102		symmetric

Use service test program. By selecting the TUNER TEST test frequencies will be stored as preset frequencies automatically.

¹⁾ If sensitivity of frequency counter is too low adjust to max. channel separation (input signal: stereo left 90% + 9%, adjust output on right channel to minimum)

²⁾ RC network serves for damping the IF-filter while adjusting the other one.

 $^{^{}m 3)}$ For AM RF adjustments the original frame antenna has to be used !

⁴⁾ MW has to be aligned before LW.

SURVEY OF CHANGES OF SERVICE MANUAL

4822 725 24963 - AZ2805, AZ2808

Added pages introduced with Service Information A97-351:

Description	Page/Chapter	Reason
ECO5 tuner board	7-2-1	Layout stage 3380.1 added and corrected adjustment table published
Changes	13-1	Survey of changes added



A97-571

5001



Product Service Group CE Audio

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Already published Service Information: A97-351 (4822 725 26013)

A97-559 (4822 725 25601)

1. New version AZ2808/10 has been introduced.

For repair information we refer to Service Manual AZ2808/00 - 4822 725 24983.

AZ2808/10 is identical to the AZ2808/01.

2. From March 1997 onwards (with production code starts from KT029710..), the ECO Short Loader mechanism is built by some parts which are made from different toolings. In order to ensure the mechanism can operate normally, we recommend to repair the mechanism if neccessary with following different service parts.

ITEM	SERVICE CODE	ARTICLE DESCRIPTION	
 202	4822 522 10625	GEAR WHEEL DRAWER	
204	4822 528 11155	CAM WHEEL	
206	4822 464 10328	CHASSIS	
208	4822 528 11153	IDLE WHEEL 1	
209	4822 528 11154	IDLE WHEEL 2	
214	4822 402 10781	LEVER SWITCH	19
216	4822 691 10609	DRAWER	
221	4822 464 10329	FRAME	and the second second
		1,1200 1997	STORAGE AND STORES

(Refer page 10-9 of Service Manual 4822 72524983 for item numbers)

422 725 25617

3. During production, following modification is made on the ECO Short Loader mechanism to avoid the mechanism comes off from its position during transportation and being dropped.

Add brackets to the rib at both sides of the Chassis (item 206). Please refer following diagram. The parts are available via following service codes:

4822 420 10641 BRACKET 4822 502 11473 SCREW M3X8 4822 505 10758 NUT M3

